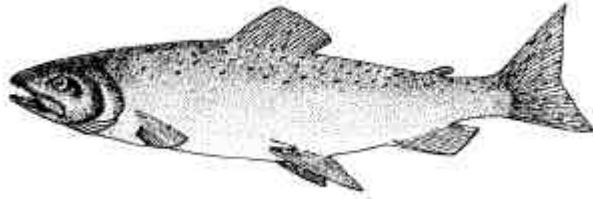


**2002
ANNEX**



CHINOOK SALMON PLAN FOR SOUTHEAST ALASKA



Regional Information Report No. 1J03-22

Alaska Department of Fish and Game
Division of Commercial Fisheries

Juneau, Alaska

April 2003

2002 ANNEX

CHINOOK SALMON PLAN FOR SOUTHEAST ALASKA



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I. INTRODUCTION

The Chinook Salmon Plan for Southeast Alaska (Holland et al. 1983) was developed by the Chinook Planning Team (CPT), under the direction of the commissioner of the Alaska Department of Fish and Game (ADF&G). The CPT was established to address chinook salmon enhancement in Southeast Alaska from a regional stock rebuilding perspective. The team's members represent chinook salmon producers, harvest managers, and ADF&G planning and permitting staff. This annual update (Annex) to the Chinook Salmon Plan serves as a single source of current information on enhanced chinook salmon production and harvest in Southeast Alaska. Each Annex describes actions taken to implement the policies and achieve the goals described in the Chinook Salmon Plan. Annexes also contain broodstock allocation plans and recommendations for the current year and summarize current issues in chinook salmon enhancement discussed at the Chinook Planning Team meeting each spring. This publication is the 20th Annex to the Chinook Salmon Plan.

One of the original objectives stated in both the *Comprehensive Salmon Plan for Southeast Alaska, Phase I²* and the Chinook Salmon Plan was to increase the chinook salmon harvest in Southeast Alaska to 537,000 fish annually from all sources. However, in 1985 the Pacific Salmon Treaty (PST) was signed, and the United States and Canada agreed to begin a coast-wide, wild chinook salmon stock-rebuilding program. Since then annual harvest limits have been imposed on the Alaska catch of PST or "treaty" fish, defined as any chinook salmon *not* of Alaska hatchery origin. The range in these annual limits has fluctuated between 146,000 fish in 1996 to 302,000 fish in 1990 and 1997. Alaska hatchery chinook salmon production beyond a preexisting level of 5,000 fish is exempt from the PST harvest limits. Therefore, hatchery production that can be harvested in discrete areas where the interception rate of non-Alaskan fish is low has become important to the fishing industry, particularly to the troll and recreational fleets. The compilation of data in each Annex assists chinook salmon producers and managers with plans to maximize benefits to Alaskan user groups while staying within the annual harvest quota.

II. SUMMARY OF CHINOOK SALMON PRODUCTION, HARVEST, AND ENHANCEMENT IN SOUTHEAST ALASKA

A. Wild Stock Production

The department has estimated chinook salmon escapement in 11 indicator river systems since 1981. Escapement goals for these rivers were set originally as the largest escapement recorded prior to 1981. Recently, coded wire tag (CWT) data, improved estimates of total escapement, and age and sex data have been used to establish maximum sustained yield (MSY) escapement goals. The escapement goals for the Taku and Stikine Rivers were revised in 1999, based on a comprehensive review of existing data. The revised Taku River escapement goal is a range of 30,000 to 55,000 large fish (age .3 and older). This new goal is similar to the previous goal of 53,000. The Stikine River goal was revised to a range of 14,000 to 28,000, which also encompasses the previous goal of 21,000 large fish. In 1998, a revised stock-recruitment analysis by ADF&G and Canada Department of Fisheries and Oceans (DFO) staff

² ADF&G 1981. The primary operating document of the Southeast Alaska Regional Planning Teams.

established an escapement goal for the Klukshu River³ of between 1,100–2,300 spawners. The Andrew Creek escapement goal was also revised in 1998 to a range of 650 to 1,500 large spawners.

In 2001, escapements generally continued to increase from the low counts in 1998 and 1999. The estimated total chinook salmon escapement to wild systems in 2001 was 151,953 large chinook, a 73% increase from the 2000 estimate (Table 1). Only the Situk River had reductions in escapement from 2000, and escapement to this system exceeded the lower limits of the escapement goals.

Mark-recapture programs were conducted on the Alsek, Chilkat, Taku, Stikine, Unuk, and Keta Rivers. Surveys will continue in other systems; there will be some increased on-ground presence in King Salmon River, Andrew Creek, and Blossom River to collect age, sex, and size data, and to look for CWTs. Wild chinook salmon smolt tagging continued in 2001 on the Taku and Unuk Rivers, and tagging programs were maintained on the Chilkat and Stikine rivers.

B. Chinook Salmon Harvests in Southeast Alaska Fisheries, 2001

The 2001 chinook salmon harvest was managed under Pacific Salmon Treaty Agreements (PSTA). Although the latest chinook salmon management agreement replaced its abundance-based predecessor implemented in 1997 and 1998 under the “Letter of Agreement Regarding an Abundance-Based Approach to Managing Chinook Salmon Fisheries in Southeast Alaska” (LOA), its provisions were similar; however, Alaska agreed to harvest fewer chinook salmon at lower abundance levels than had been harvested previously under either the PST or the LOA. In addition to complying with the PSTA, the 2001 chinook salmon fisheries were managed to (1) continue the Southeast Alaska wild chinook salmon conservation program; (2) provide maximum opportunity to harvest Alaska hatchery-produced chinook salmon; and (3) minimize incidental mortality during chinook salmon non-retention periods by closing areas of high chinook salmon abundance.

The initial quota for the 2001 fishery was 190,000 treaty fish, based on a preseason abundance index of 1.14. Under the current Alaska Board of Fisheries (BOF) plan, the commercial troll and sport fisheries divide the quota using a 80:20 ratio, respectively, after 8,600 plus 4.3% of the annual quota for chinook salmon has been subtracted for net fisheries. Following this formula, 8,200 fish were allocated to the seine fishery, 7,600 to the drift gillnet fishery, and 1,000 to the set gillnet fishery. The remaining 173,000 fish were split between the troll and sport fisheries, resulting in allocations of 138,000 and 35,000 fish, respectively.

Troll Fishery:

Management of the troll harvest is critical to achieving the PST quota each year, because the troll fleet harvests the majority of chinook salmon in Southeast Alaska. For 2001 the summer season harvest target was estimated by subtracting the number of fish harvested in the winter fishery (19,700 fish), the spring fishery (10,000 fish), the pre-treaty production of Alaska hatchery fish (3,700 fish), and an estimated 1,000 “risk-factor fish” from the initial estimated PST baseline quota (138,000 fish). Following this procedure, the 2001 summer season harvest target was calculated to be 103,600 PST fish. In addition, the department also managed the troll fishery to reduce the cumulative harvest overage from the 1999 and 2000 seasons. The Southeast Alaska King Salmon Management Plan (5 AAC 47.055[j]) specifies that the commercial troll fishery be managed to reduce the overage. This plan also provides for accounting of

³ The Klukshu River is the main spawning tributary of the Tatshenshini River, which is the most productive fork of the Alsek River.

overages so that the overall allocation goals specified in the plan will be met. The harvest reduction attributable to the overage was approximately 3,600 fish; this reduced the summer troll quota to 100,000 fish. According to the BOF plan, 70% (70,000 fish) chinook salmon were to be harvested in the first opening and the remaining 30% (30,000 fish), following any closure for coho salmon management in August. The first opening was managed for a harvest of 70,000 treaty fish plus about 5% Alaska hatchery fish; that is, a total of 72,500 fish.

Winter Season

The 2001 winter troll season opened on October 11, 2000 and continued through April 14, 2001. By regulation, the winter fishery occurs in those areas of Southeast Alaska east of the surf line south of Cape Spencer, including the waters of Yakutat Bay. All outer coastal areas, including the Exclusive Economic Zone (EEZ), are closed during the winter season. A catch ceiling of 45,000-fish is mandated in regulation for this winter fishery. Twenty-two thousand six hundred chinook salmon were harvested during the 2001 winter troll fishery, representing 15% of the total chinook troll harvest for 2001 (Table 2). The harvest and harvest per landing decreased 37 and 45%, respectively, from those of the previous season.

Summer Season

The summer troll season extends from April 15 through September 30 and in recent years has been divided into two fisheries: the spring and general summer fisheries. Two categories of fisheries occur during the spring fishery, “experimental” and “terminal.” Both fisheries target Alaska hatchery-produced chinook salmon. Experimental fisheries occur mostly during May and June, primarily in the inside waters near hatchery release sites or along migration routes of returning hatchery fish. Terminal fisheries occur in Terminal Harvest Areas associated with hatchery release sites, where fisheries are opened in accordance with schedules developed by each hatchery corporation’s board of directors. Spring fishery areas that were open in 2001 are shown in Figures 1-5.

Harvest opportunities in the experimental fisheries have been increasing since their inception in 1989. From mid-April through June 30, 2001, 24 areas were open for varying lengths of time; these openings accounted for a combined total of 988 area-days. The total experimental fishery chinook salmon harvest in 2001 was 28,192 fish; of those, 50% were Alaska hatchery fish. The most productive experimental fishery areas were Eastern Channel (4,674 fish) and Middle Island (2,135 fish) near the Medveje Creek Hatchery in Sitka; Chatham Strait (3,456) near Hidden Falls Hatchery; and Mountain Point (3,155 fish) and Gravina Island (2,015 fish) near the Whitman Lake Hatchery in Ketchikan (Table 3). Of these areas, the harvests at Middle Island and Gravina contained only 30–35% Alaska hatchery chinook salmon. Experimental fisheries represented 18.4% of the total troll chinook salmon harvest in 2001, compared with 13.1% in 2000 (Figure 6).

Five terminal area fisheries were opened in 2001. The terminal area fisheries yielded 7,081 chinook; all of these were counted as Alaska hatchery fish. Hidden Falls was the most productive terminal area, contributing 51% of the total terminal harvest.

No new areas were opened in 2001. The north and south Sumner Strait areas were combined into one area (105-41) and the Carroll Inlet terminal area (101-46) was eliminated and added to the Mountain Point experimental area (101-45). The West Behm Canal area was reopened for the first time since 1989 to target Ketchikan hatchery returns. Several areas opened earlier in 2001 than in the past. These areas are located near hatcheries that expected substantial increases in their chinook returns and historically have had a high percentage of Alaska hatchery fish.

The spring fishery's total harvest of 35,331 chinook salmon contained 60% Alaska hatchery fish (Table 4). The chinook harvest was approximately 6,400 fish greater than the 2000 harvest, but the Alaska hatchery contribution decreased from 67 to 60%. In 2001, a slightly higher percentage of the annual troll harvest (23%) was taken in the spring fishery, compared with that in 2000 (18%); 17,161 treaty fish were harvested in the spring fishery in 2001.

The first general summer troll fishery occurred July 1 through July 6; the harvest was 64,854 chinook salmon, and 61,822 of those were counted as treaty fish (Table 4). The harvest per fleet day was 10,800 fish (Table 5). Following the first opening, the areas that had high chinook salmon abundance were closed (Figure 7). After the fish ticket data were reviewed, it was apparent that, although the target had not been met for the first opening, the number of chinook salmon left to be harvested (38,200) was not large enough to warrant another opening prior to the planned mid-August opener following the coho salmon closure. On August 3 an inseason adjustment to the chinook salmon abundance index was made, as permitted under Annex 4, Chapter 3 of the PSTA. The inseason adjustment resulted in a decrease in the chinook salmon abundance index from 1.14 to 1.10; this reduced the all-gear quota from 190,000 to 178,500 fish and subsequently reduced the troll quota by 8,200 fish. In addition to the quota reduction, the updated catch of treaty chinook salmon in the spring fishery increased to 14,000 fish from the 10,000 fish projected on July 1. Combining the quota reduction and the additional 4,100 fish from the spring fishery resulted in a remainder of approximately 26,700 chinook salmon to be harvested in the summer fishery.

When the troll fishery reopened on August 18 to both coho and chinook retention, it was monitored inseason using fishery performance data and on-the-grounds catch information. The chinook salmon catch rate during the second opening was lower than expected, and the fishery remained open through September 5. About 30,509 chinook salmon were harvested during the second summer opening; of these, 29,422 were treaty fish, which brought the final summer troll harvest to 95,363 chinook salmon, of which 91,244 were treaty fish. The total 2001 troll chinook salmon harvest was 153,280 fish, and 128,692 of these were treaty fish. This harvest fell well below the troll treaty chinook salmon quota of 138,000 fish at the preseason abundance index of 1.14; however, it was within the 7.5% management range designated by 5 AAC 29.060(c). The amount of treaty chinook salmon in the harvest was also below the troll quota of 129,800 fish at the inseason abundance index adjustment of 1.10 and within the 7.5% management range.

In 2001 the CFEC renewed 927 power troll permits and 1,039 hand troll permits, representing 2 and 11% decreases, respectively, from renewals issued in 2000. Preliminary estimates indicate that 707 power troll permits and 312 hand troll permits were actually fished. This represents a 3% decrease in both power troll and hand troll effort, compared with the effort in 2000. Compared to the 2000 season, both power and hand troll participation in 2000 increased during the spring and winter fisheries and decreased slightly during the summer (Figure 8).

Boat days of effort during the summer chinook salmon retention period increased substantially for the second year in a row (Table 6). The chinook salmon general summer fishery was open for 25 days in 2001, including 10,788 boat days of effort, which is the highest since 1998. The Alaska hatchery contribution of 28,480 fish represented 19% of the 2001 total (Table 7).

Net Fisheries:

Based on the 2001 annual harvest limit of 189,900 treaty chinook salmon (28 inches or larger), the purse seine quota was 8,166 chinook salmon. The drift gillnet chinook salmon quota was 7,600 fish, and the set gillnet quota was 1,000 fish. Chinook salmon less than 21 inches in length may not be retained in the purse seine fishery; chinook salmon between 21 and 28 inches may be retained but not sold. These restrictions do not apply to the gillnet fisheries. As in the troll fishery, chinook salmon produced by

Alaska hatcheries, minus adjustments for pre-treaty hatchery production and estimation error, do not count against the annual quota for treaty fish.

In order to stay within the harvest guideline for treaty fish, periods of nonretention of chinook salmon are established each year for the purse seine fishery. In 2001, nonretention was in effect from the start of the season until August 2 in all fisheries except the Hidden Falls Terminal Harvest Area, where nearly all harvested chinook salmon are of Alaska hatchery origin. The total 2001 purse seine harvest of chinook salmon was 19,730 fish (Table 4). Of these fish, 14,799 were considered to be hatchery-produced and were excluded from consideration as treaty fish. The seine fishery harvested 4,931 treaty fish in the general seine fishery.

The total drift gillnet harvest of chinook salmon in 2001 was 11,274 (Table 4). Of these, approximately 8,066 fish were from Alaska hatcheries and did not count against the seasonal harvest guideline. As a result, total drift gillnet harvest of treaty fish was 3,208, roughly 4,392 fish below the 7,600 harvest guideline.

In 2002, terminal exclusion zones will be in effect for the net fisheries in the Taku and Stikine Rivers. Chinook salmon harvested in these areas will be excluded from the treaty quota only after escapements have been met and a baseline catch level for the fisheries has been calculated.

Recreational Fisheries:

The sport fishery is allocated 20% of the quota of treaty chinook salmon remaining after the deduction of the net fishery allocation. Under the present system, once the preseason abundance index is determined, the department sets an initial sport fish bag limit that will achieve the 20% allocation. Additional inseason management measures are taken if the sport harvest appears to be deviating more than 7.5% from the target. In 2001, the sport quota was 35,000 chinook salmon. The actual harvest of treaty chinook salmon was 46,998; this harvest exceeded the upper management target ($35,000 \pm 7.5\%$) by 9,400 fish.

The 2001 sport harvest of chinook salmon was 72,291 fish (Table 4). This represents an increase of approximately 9,000 fish from that of the previous year. The Alaska hatchery contribution was 30,862 chinook salmon. Most of the Alaska hatchery harvest occurred in the general fisheries (18,257 fish); the remainder was harvested in hatchery terminal areas (12,605 fish). The calculated add-on of 27,566 chinook salmon was 35% of the total catch in 2001, similar to 34% in 2000. Preliminary estimates of hatchery contributions are raw expansions based on CWT recoveries in the sampled marine boat sport fisheries (Table 8). Sport harvest estimates will be adjusted with data collected in the annual Statewide Harvest Survey, which is a random postal survey of sport fishing license holders.

The sport harvest in the Ketchikan area contained the highest percentage of Alaskan hatchery chinook salmon (74%) of all sampled areas; the largest contributor to the Ketchikan area was Whitman Lake Hatchery, with 2,851 out of 4,216 Alaska hatchery chinook salmon harvested. Whitman Lake was also the largest hatchery contributor in Southeast Alaska, accounting for 3,155 fish. Macaulay Hatchery contributed 2,069 chinook salmon to the Juneau area sport fisheries, and Medvejie Hatchery contributed just under 2,000 chinook salmon to the Sitka area sport fishery. The Blind Slough fishery, near Crystal Lake Hatchery, again produced the highest terminal area chinook salmon sport harvest of about 3,500 fish.

Summary of the 2001 Harvest:

The total 2001 chinook salmon harvest by all gear types was 264,475 fish (Table 4). Of these, 186,838 were treaty fish, which is close to the adjusted quota of 190,000. The remainder of the actual harvest, an estimated 85,755 Alaska hatchery chinook salmon, translated into a 77,637-fish quota add-on, which, along with a terminal exclusion for wild Alaska fish of 1,528 fish, gives the total harvest number. Contribution of Alaska hatchery chinook salmon to the total catch was 33% in 2001, a slight increase from last year's 32% (Table 9; Figure 9).

C. Enhanced Production

The locations of (1) all hatcheries that produce chinook salmon, (2) significant remote release sites, and (3) ancestral rivers of the major hatchery stocks in Southeast Alaska are shown in Figure 10. The map key associated with Figure 10 lists the stream numbers for all past and present release sites and stream numbers of ancestral chinook salmon stocks used in the region.

Hatchery Releases:

Table 10 shows the actual and projected releases of chinook salmon by brood year and is organized by age at release; it also shows release sites for each hatchery. Release numbers match the on-line database of ADF&G's Coded Wire Tag and Otolith Processing Laboratory and, therefore the PSMFC database. Total release numbers are shown in Figure 11 by brood year and in Figure 12 by calendar year.

A total of 7,254,000 juvenile chinook salmon were released from Southeast hatcheries in 2001. This 3.4% decrease over releases in 2000 is attributable to usual year-to-year variation in production. The majority of releases were age-1 smolts; however, SSRAA released 300,000 fry into Long Lake at Neets Bay, and both hatcheries at Medvejie Creek and Tamgas Creek produced 309,500 and 187,500 age-zero smolt, respectively.

Although there were no major programmatic changes in release numbers from the previous year, there were some changes in release locations. All chinook salmon formerly released at SSRAA's Earl West Cove will be released from Anita Bay, beginning with the 2001 release of 361,000 smolts. Also Tamgas Creek Hatchery shifted 85,000 chinook salmon to their age-0 smolt program in 2001, and Medvejie Hatchery increased their age-0 smolt program by 104,000 fish.

Smolt Capacity:

Production capacity for the past seven years is shown in Table 11. Approximately 80% of the current capacity for Southeast Alaska hatcheries is being utilized. A new increment of chinook salmon production was added to Southeast's total smolt capacity in 2002; production from Hidden Falls will be increased by 1 million smolts. In addition, Port Armstrong Hatchery resumed production of chinook salmon in 2001, receiving 125,000 eyed eggs from Little Port Walter's (LPW) Unuk stock. This facility has not released chinook smolts since 1991; however, its permitted production is 1.5 million smolts. When and if Port Armstrong reaches its production capacity, nearly all of the current permitted capacity for chinook salmon production will be achieved.

Harvest of Hatchery Fish:

Hatchery operators reported a total return of 141,000 chinook salmon in 2001, based on recoveries of coded wire tags in sampled fisheries, estimates of contribution to unsampled fisheries, and totals of broodstock and escapement (Tables 12 and 13). Of this total, 53,700 fish (39%) were harvested in common property fisheries. This is down significantly from the 73,000 fish (60%) harvested in CP fisheries in 2000. Cost recovery by hatchery operators increased from 38,000 fish (31% of return) in 2000 to 69,400 fish (51% of return) in 2001. Broodstock needs were relatively unchanged in 2001, because 18,169 fish were either spawned or considered to be surplus and given away to the public. The 2001 return replaces the 2000 return of 139,700 fish as the largest ever (Table 13).

In 2000 the troll harvest represented 21% of the hatchery catch; in 2001 it dropped slightly to 18%. Concurrently, the harvest by net gear decreased drastically from 23 to 9% and the sport harvest decreased moderately from 16 to 12%. Although the number of enhanced chinook salmon harvested in the common property fishery was down, compared with those in 2000, it was still the second-highest CP contribution since 1996. However, as a percentage of the total enhanced return, it was one of the lowest CP contributions since the beginning of the enhancement program (Figure 13).

Historically, the northernmost hatcheries contribute primarily to the central and southern intermediate PSMFC areas (Figure 14), while the southernmost hatcheries contribute more to the southern inside areas (Table 14). Total adult returns by release site from 1980 to 2001 are provided in Table 15. Exploitation rates by release site are provided in Table 16.

Disposition of BY '01 Eggs:

Southeast Alaska hatchery operators took 11,470,100 chinook salmon eggs in 2001. After discarding fertilized eggs from BKD positive parents and making other adjustments in numbers, a total of 10,302,100 eggs were incubated (Table 17). Regionwide, the total incubation survival to the eyed stage was 95%.

Four transfers of BY '00 chinook salmon eggs occurred within the region:

- Macaulay Hatchery received approximately 414,000 green eggs from NSRAA. 2001 was the last year Macaulay hatchery had adults of both Andrew Creek and King Salmon River ancestral stocks returning to Gastineau Channel; therefore on-site egg takes will resume in 2002 when only the Andrew Creek stock will be returning. DIPAC chinook eggs normally come from Crystal Lake Hatchery, but survival of adults in Blind Slough were so bad that Crystal Lake did not have any surplus eggs in 2001.
- Crystal Lake Hatchery received 450,000 eyed eggs from Whitman Lake Hatchery as part of the ongoing SSRAA/ADF&G Cooperative Agreement for Chinook Salmon Production in the Ketchikan Area. Resultant smolts will be transferred back to SSRAA for release at Neets Bay in 2003.
- Macaulay Hatchery also received 105,000 green eggs from Burro Creek Hatchery. Smolts from these eggs will be released at Pullen Creek in Skagway as part of the Tahini River broodstock development program that will eventually replace Andrew Creek stock at the Macaulay Hatchery.
- Port Armstrong received 125,000 eyed eggs from Little Port Walter's Unuk stock.

A projected total release of 6,430,500 age-one smolts from BY 2001 is slightly more than the projected release from BY 2000. Similar to 2000, two groups of age-0 smolts will be produced from BY 2001 at Medvejie and Tamgas Creek Hatcheries (Table 18).

III. BROODSTOCK ALLOCATION

A. Broodstock Development and Diversity

Five chinook salmon broodstocks are currently used in hatchery production in Southeast Alaska; however, two of these stocks, Andrew Creek and Chickamin River, have accounted for the majority of releases since the 1988 brood year (Figure 15). The Tahini River chinook salmon stock has been the least-utilized stock, and its development would provide an opportunity to increase the genetic diversity of hatchery chinook salmon stocks in Southeast. Macaulay Hatchery is geographically the closest major facility to the Tahini River and therefore the logical site for rearing and release of this stock. A broodstock development program that calls for a series of smolt releases at Skagway will eventually result in enough adults to provide gametes for DIPAC's Macaulay Hatchery chinook salmon program. This program remained on track in 2001 when Tahini River returns to Burro Creek Hatchery (the only hatchery source for this stock) provided 105,000 eggs. DIPAC staff have calculated that the development schedule will take 10–15 years to achieve the goal of converting DIPAC's production to the Tahini stock. The schedule can be accelerated if wild egg takes supplement the return of enhanced fish. A cooperative agreement (COOP-00-084) has been approved by DIPAC, ADF&G's Sport Fish Division, Burro Creek Hatchery, and the City of Skagway to describe what each party will accomplish toward the common goals of improving sport fishing and establishing a significant hatchery broodstock.

NMFS staff have advised the Chinook Planning Team of its intention to resume the chinook salmon broodstock maintenance program at Little Port Walter. The LPW Unuk River broodstock is one of the two remaining hatchery stocks derived from the Unuk River. The other one at Deer Mountain Tribal Hatchery is in jeopardy also because of financial difficulties of maintaining hatchery operation. The Port Armstrong and Coffman Cove chinook salmon projects will eventually utilize Unuk River stock. One of the policies for enhanced chinook salmon production in the Chinook Salmon Plan states that "Genetic variability in enhancement stocks is to be maximized i.e., as many different hatchery stocks as feasible should be developed" Maintaining all existing hatchery stocks should be the goal of this policy.

B. Egg Allocation Criteria and Plan for 2002

Allocation criteria, first formulated in 1987, are relevant only in cases where chinook salmon eggs or smolts are transferred either between hatcheries or from the wild to hatcheries. Allocation criteria for chinook salmon eggs can be found in McGee et al. 1996.

The following planned or potential egg transfers are noted for 2002:

Little Port Walter:

Stock	Total Eggs Expected	Needed for LPW	Potential Transfer
Unuk	500,000	200,000	300,000
Chickamin	600,000	All	

With the resumption of chinook salmon production at LPW, some eggs from Unuk River stock will be available for use at other facilities. Armstrong-Keta, Inc. received 125,000 eggs of Unuk River origin from LPW in 2001 and may receive as many as 250,000 eggs in 2002.

Deer Mountain Tribal Hatchery:

Stock	Total Eyed Eggs Expected	Needed for DMTH	Potential Transfer
Unuk	175,000	133,000	42,000

Deer Mountain Tribal Hatchery will maintain its production of Unuk River chinook salmon. Klawock River Hatchery has permission to use this stock for the Coffman Cove project; however the project will not begin in 2002.

Whitman Lake Hatchery:

Stock	Total Eyed Eggs Expected	Needed for WLH	Planned Transfer
Chickamin	2,000,000	1,500,000	500,000

All expected 2002 brood year eggs are fully allocated under the SSRAA/ADF&G Cooperative Agreement for Chinook Salmon Production. According to the agreement, 500,000 eyed Chickamin chinook salmon eggs (or the equivalent number of green eggs) will be transferred to Crystal Lake Hatchery, and the resultant smolt will be transported to SSRAA's Neets Bay hatchery for imprinting and release in 2004.

Crystal Lake Hatchery:

Stock	Total eyed eggs expected	Needed for CLH	Planned Transfer
Andrew Cr	2,000,000	1,700,000	300,000

Crystal Lake Hatchery plans to transfer all excess BY 2001 Andrew Creek chinook salmon eggs to Gastineau Hatchery. No chinook salmon eggs will be taken at Gastineau until King Salmon River returns are complete and returning adults are once again exclusively Andrew Creek stock.

Burro Creek Hatchery:

Stock	Total Eggs Expected	Needed for Burro Cr	Planned Transfer
Tahini R	100,000	0	100,000

Burro Creek Hatchery plans to transfer its permitted maximum of 100,000 Tahini River chinook salmon eggs to Gastineau Hatchery for incubation and rearing (Cooperative Agreement COOP-00-084). Resultant smolts will be transported to Pullen Creek pond for imprinting and release in 2003.

IV. HATCHERY RETURN PREDICTIVE MODELS

Each year hatchery operators are asked to predict the number of chinook salmon expected to return to hatchery facilities in Southeast Alaska. These preseason projections include total return, number of fish expected to be harvested in traditional and terminal fisheries, and number needed for brood stock. There are

no standardized procedures for making such projections, and the inaccuracy inherent in predicting future events has resulted, in some years, in substantial differences between the prediction and actual returns. Some of the techniques used to predict future chinook salmon returns are described below; most remain the same as those used in 2000.

A. Little Port Walter

The Little Port Walter facility uses a dual-model approach for predicting year-class strength of chinook salmon in fisheries and in returns to the hatchery. The first model is an overall survival estimator for each brood year based on a linear-regression prediction using the square root-transformed percent survival of recoveries of zero-ocean-age mini-jacks at the Sashin Creek weir as an independent predictor variable (mini-jack survival is not included in the total). No other predictor variables are used with the model.

The second model is a synthesis of previous years' returns, age distributions, and sex ratios at the weir. This analysis predicts percent returns for a given cohort in a given year based on the previous year's data combined with the historic ratios between age classes.

B. Crystal Lake Hatchery

During the year preceding the target year, the initial prediction for chinook salmon returns in the target year is based on historic age-class fractions of each brood year. Survival rates of age-1.2 and age-1.3 fish returning in the year preceding the target year are used as predictors.

C. Deer Mountain Tribal Hatchery

Predictions are based on the same technique used for predicting the Crystal Lake Hatchery return, with the exception that information from the winter fishery is not used.

D. SSRAA Hatcheries

SSRAA employs a synthesis of previous year's return and distribution information similar to that for Little Port Walter to predict returns for the subsequent year at the Whitman Lake and Neets Bay Hatcheries. The analysis predicts percent return for a given cohort in a given year based on the previous year's data combined with the historic ratios among age classes. The distribution between fishery and rack components of the run is based on the most recent three-year average.

E. NSRAA Hatcheries

A great deal of effort goes into regular sampling of the chinook salmon return each year to NSRAA facilities to be able to generate accurate estimates of age-at-return. These estimates are used to examine historic relationships between age classes for each hatchery. Returns of age 1.2 fish are predicted using historic averages. Return predictions for age 1.3 and 1.4 fish are based on regression analysis of the previous year's age 1.2 and 1.3 returns, respectively. Size-at-age information is also analyzed. Predictions may be adjusted if size data suggests a shift from normal age-at-return ratios.

V. THE 2002 CHINOOK PLANNING TEAM MEETING

The Chinook Planning Team met on April 22 in the ADF&G Southeast Regional Office. Major topics of discussion are summarized below:

Little Port Walter resumed production of chinook salmon in 2001, and the facility will concentrate on wild/enhanced interactions. Frank Thrower gave an update on LPW and their current emphasis on wild/enhanced interactions; staff will be presenting research results on outbreeding depression studies in 2002.

Chip Blair provided an update on NSRAA chinook salmon activities; he inquired about the possibility of developing white kings at Hidden Falls because of their higher value. The CPT suggested he talk with ADF&G genetics group.

Rick Focht gave an update on the Tahini stock development. The city of Skagway is not fulfilling its part of the cooperative agreement to develop a new production facility in Skagway. DIPAC was planning a meeting with Skagway, and the CPT offered to write a letter.

Al Edsal updated the group on POW activities. Mr. Edsal has been hired to investigate the feasibility of producing chinook salmon in the Port St. Nicholas area. Southeast Sustainable Salmon Fund monies have been earmarked for this project.

Status of Hatchery Production

Little Port Walter Hatchery will resume production of chinook salmon in 2001. LPW production will be maintained on a year-to-year basis, depending on availability of funding.

For 2001, SSRAA expects a large chinook return to Whitman Lake and expects the department to hold a personal-use gillnet fishery to remove excess fish from Herring Cove Creek. In addition, fisheries at Mountain Point and Gravina Island will be opened longer in 2001. SSRAA began rearing the full complement of 250,000 chinook salmon fingerlings in Long Lake beginning with the 1999 brood. This moves the entire SSRAA component of the Neets Bay chinook salmon production out of the saltwater net pen complex and into the lake-rearing mode. The move is expected to result in better survival to smolt and better smolt quality. Long Lake chinook salmon production constitutes SSRAA's part of the Neets Bay release described in the ADF&G/SSRAA Cooperative Agreement for chinook salmon production in southern Southeast.⁴ SSRAA hopes to get its first return of chinook salmon to Long Lake in 2001.

NSRAA will release up to one million, 45-gram smolts from Hidden Falls and two million 50- to 60-gram smolts from Medvejie. They also expect to release up to 200,000 age-zero smolts from saltwater pens at Medvejie by the first week in July.

The Port Armstrong Hatchery intends to resume production of chinook salmon in 2001. Appropriate transport permits have been approved to transfer Unuk River origin eggs from Little Port Walter. Port Armstrong intends to begin with 125,000 eggs.

⁴ See McGee et al. (1997) for a description of the cooperative agreement.

DIPAC's chinook salmon program will be unchanged for 2001. Smolts of Andrew Creek origin will be released at three sites in the Juneau area, and Tahini River origin smolts will be transported to Skagway for imprinting and release from Pullen Creek pond. DIPAC will need to obtain chinook eggs from Crystal Lake or another source of Andrew Creek stock for at least two more years. The Tahini River broodstock development program is progressing. Approximately 90,000 smolts were released at Skagway in 2000. Only 30,000 smolts were available for release in 2001; however, the eggtake goal of 100,000 was exceeded slightly in 2000 and expected to be reached in 2001. An eggtake at the Tahini River is possible if insufficient eggs are available from Burro Creek; however, before such an eggtake could occur, the escapement goal would need to have been reached and the community of Haines would need to agree to the removal of eggs for the Skagway chinook salmon program.

As part of the Tahini River broodstock development program, the City of Skagway has initiated plans to develop a small hatchery facility with a capacity of 200,000 to 300,000 smolts. The city is considering the use of water from the Dewey Lake hydropower project for the hatchery. Further planning and an application for a hatchery permit will be necessary before the project can continue. In addition, the White Pass Railroad wants to use the land on which the Skagway City School hatchery is located, so a new school hatchery will need to be constructed by 2003 if that program is to continue.

Federal Funding

Two sources of funding for possible use in chinook salmon enhancement have been established in the last year. The *Northern Fund*, associated with the 1999 U.S./Canada Pacific Salmon Treaty agreement, can be used for transboundary river projects in the U.S. and B.C. Some \$75 M will be put into an endowment, and a board will oversee disbursement of all or part of the earnings. Makeup of the board has yet to be determined. The fund can be used for all species.

The second source of funding, the *Southeast Sustainable Salmon Fund*, contains \$14 M in federal money with a second increment of \$9 M for 2001. Project proposals are solicited for the following four areas of application: (1) habitat restoration and protection, (2) enhancing economic opportunities, (3) research and monitoring, and (4) national and international cooperation. There will be a five-year period in which to expend the funds, and the Governor's office will have oversight. ADF&G staff from the commissioner's office will coordinate the process of developing priorities.

VI. EFFECT OF THE SOUTHEAST ALASKA CHINOOK SALMON HATCHERY PROGRAM ON WILD STOCKS

Salmonid hatchery programs in the Pacific Northwest have recently been identified as being among the causal factors in the listing or pending listing of several species of salmon under the Endangered Species Act. Hatchery programs have been implicated because the genetic integrity of wild stocks has been lost through mixing of wild and hatchery fish during spawning. In addition, wild stocks there have been over harvested because of greater fishing pressure on hatchery stocks.

The Alaska hatchery program was designed to minimize impacts on wild stocks through consideration of the topics discussed in the following sections. These topics are considered to be important factors in maintaining the genetic integrity of wild stocks.

A. Site and Stock Selection

Southeast Alaska hatchery sites, remote release sites, and broodstocks were selected to minimize the chance of returning hatchery stocks mixing with wild stocks (Holland et al. 1983). No hatcheries in Southeast Alaska were built on streams with natural runs of chinook salmon. With few exceptions, chinook salmon hatcheries in the region are located on islands at or near tidewater (Heard et al. 1995; Heard 1996). Most hatcheries are 50 to 240 km from any endemic chinook salmon stock. The Chinook Salmon Plan (Holland et al. 1983) delineates a “sensitive” and a “non-sensitive” zone for chinook salmon stock selection and transport considerations. The zones are based on the potential for impacting wild stocks. A sensitive zone, in which wild spawning populations are present, is comprised of commercial fishing Districts 101, 107, 108, 110, 111, and 115 (Figure 16). Within the sensitive zone, movement of stocks is limited and new stock needs must be met with the closest feasible stock. The non-sensitive zone, in which there are no systems that contain self-sustaining populations of chinook salmon, is delineated by commercial fishing Districts 102, 103, 104, 105, 106, 109, 112, and 116. Stock needs in the non-sensitive zone may be met by any stock approved through the department review process.

B. Straying

An examination of several wild and hatchery systems indicates there has been very little straying. Results from surveys that examined wild chinook salmon populations for hatchery CWTs were first reported by Heard et al. (1995); survey results through 1993 indicated that 0.30% of the fish examined in wild stock systems were strays from hatcheries. Beginning in 1997, extensive numbers of chinook salmon in wild systems were sampled for biological data, including CWTs. Examination of 12,127 chinook salmon in 1997, 8,508 in 1998, 8,980 in 1999, and 9,540 in 2000 indicated hatchery stray rates of 0.35, 0.42, 0.30%, and 0.42%, respectively. Survey results up to and including 2000 are reported in Table 19. Historically, escapements to the Farragut River and to Andrew Creek have had an unusually high incidence of hatchery strays. The majority of strays into Andrew Creek are from releases of Andrew Creek stock at Earl West Cove. Releases at this site, which is approximately 20 miles from the mouth of the Stikine River, will be discontinued after 2001.

Two hatchery CWT-marked chinook salmon were found in the escapement to Andrew Creek in 2000, out of 151 fish examined. One of these fish was from Little Port Walter hatchery; the other was from Neets Bay hatchery. One hatchery CWT was also found in the escapement to the Chickamin River in 2000, out of 211 fish examined; it was from Tamgas Creek Hatchery.

C. Genetic Studies

Genetics staffs of several organizations have been collecting and analyzing genetic data from wild-spawning and hatchery populations of chinook salmon throughout Alaska for a number of years. The goal of one recent ADF&G project was to develop a database that could be used to identify the origin of chinook salmon harvested as trawl bycatch in Alaska waters (Crane et al. 1996). In addition, researchers sought to define relationships within and among hatchery stocks. In Southeast Alaska, collections were made from six wild-spawning populations and 11 (by site and brood year) derivative hatchery stocks. Data were analyzed for temporal stability of allele frequencies of a broodstock within hatcheries, allele frequency homogeneity among hatcheries using the same broodstock, and homogeneity of allele frequencies between a hatchery stock and its wild stock progenitor. These studies will enable detection and tracking of genetic changes of individual stocks both through time and between hatchery broodstocks. ADF&G's Genetic Policy prohibits the planting of chinook salmon offspring of wild broodstock beyond

the F1 generation back into their stream of origin, to avoid introduction into the wild population of any salmon whose allele frequencies may have been altered through domestication.

D. Domestication Effects Studies

Studies have been initiated by the National Marine Fisheries Service Auke Bay Lab, in cooperation with ADF&G, to evaluate any differences in performance and life history characteristics between native Southeast Alaska chinook salmon stocks and hatchery stocks derived from them. Concern has been expressed over the potential deleterious effects of hatchery practices on wild salmon stocks. Alaska is in the unique position of being able to compare unperturbed wild chinook salmon with fifth and sixth generation hatchery stocks that originated from them. Gamete collections were made in 1996 and 1998 on the Chickamin and Unuk Rivers, respectively, to compare the offspring of wild stock fish with those from the Little Port Walter Hatchery's Chickamin and Unuk stocks. Comparisons include evaluating the ability of fry to avoid predation, hatchery performance (growth and survival to smolt), the ability of smolt to act as predators on pink fry, marine survival, age at maturation, and growth. Preliminary results indicate no significant differences in the predation behavior and feeding trials. Evaluation will continue and hopefully expand to other chinook salmon stocks.

Based on the above information, it appears the hatchery program has had little or no deleterious effect on the genetic integrity of Southeast wild stocks. The higher-than-expected amount of straying into the Farragut River, however, is a cause for concern and should be regularly monitored. Research on the effects of hatchery stock/wild stock interactions should continue to be supported.

The department manages chinook salmon harvests primarily to sustain the health and maximum sustainable yields of wild stocks. Hatcheries and remote release sites have been situated to enable managers to maximize the harvest of hatchery returns with minimum disruption of wild stocks. The "spring" fisheries (i.e., experimental and terminal fisheries) target hatchery returns in areas where abundance of wild stocks is low. Management of the experimental fisheries is based primarily on the percentage of hatchery chinook salmon present, as determined through extensive catch sampling. A low abundance of Alaska hatchery stocks results in reduced fishing time.

VII. BROODSTOCK PERFORMANCE

The Chinook Planning Team, as part of the Southeast Alaska-wide Production and Management Committee, has compiled marine survival and troll harvest rate data for the major, long-standing chinook salmon programs in Southeast. The impetus for formation of the committee in 1998 was to prepare a proposal for supplemental chinook and coho salmon production, using federal funding anticipated at that time. The survival and troll harvest rates are now included in the Chinook Annex (Figure 17). Troll harvest rates are expressed as percent of total return, including all age classes. Survival rates are based on all recoveries, from all age classes.

Marine survival rates for chinook salmon released from most southern and central Southeast facilities have declined since the beginning of programs in the early 1980s; however, at some of these facilities there are indications that survival rates are improving (Crystal Lake, Earl West Cove, Whitman Lake, and

Tamgas Creek). Survival rates at the largest northern Southeast and Chatham Strait facilities (Medvejie and Hidden Falls) increased in the late 1980s, but they may now be tapering off somewhat.

Troll harvest rates are on an upward trend for most facilities as the fleet and managers become more adept at targeting enhanced fish. Notable exceptions to the upward trend are Crystal Lake Hatchery, where the emphasis has shifted to producing chinook salmon for the sport fishery, and Tamgas Creek, which has no experimental or terminal troll fishery that targets the return.

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Table 1. Estimates of total escapements of chinook salmon to escapement indicator systems and to Southeast Alaska and transboundary (T) rivers, 1975–2001^{a,b}

Year	MAJOR SYSTEMS				MEDIUM SYSTEMS								TOTAL		Expanded Region Total
	Alsek ^c (T)	Taku ^d (T)	Stikine ^e (T)	Major Sub T.	Situk	Chilkat	Andrew	Unuk (T)	Chickamin (T)	Blossom	Keta	Medium Sub T.	King Salmon	ALL SYSTEMS	
1975		12,920	7,571	20,491			520		1,481	365	508	2,873	62	23,426	27,888
1976	4,898	24,582	5,723	35,203	1,365		404		627	170	210	2,776	96	38,075	45,327
1977	12,130	29,496	11,445	53,071	1,732		456	3,896	1,450	280	575	8,389	199	61,659	73,404
1978	11,458	17,124	6,835	35,417	776		388	4,424	1,234	358	980	8,159	84	43,660	51,976
1979	16,316	21,617	12,610	50,543	1,266		327	2,304	954	135	1,065	6,051	113	56,707	67,508
1980	10,398	39,239	30,573	80,210	905		282	4,064	1,779	223	480	7,732	104	88,046	104,817
Average	11,040	24,163	12,460	45,823	1,209		396	3,672	1,254	255	636	5,997	110	51,929	61,820
1981	8,302	49,559	36,057	93,918	702		536	2,924	1,536	398	823	6,918	139	100,975	120,208
1982	9,076	23,847	40,488	73,411	434		672	5,404	2,284	863	1,885	11,542	354	85,307	101,555
1983	9,848	9,795	6,424	26,067	592		366	4,500	2,398	1,473	2,055	11,383	245	37,695	44,875
1984	6,588	20,778	13,995	41,361	1,726		389	7,348	4,408	1,270	1,525	16,666	265	58,292	69,395
1985	5,657	35,916	16,037	57,610	1,521		640	4,736	3,824	1,773	1,560	14,054	175	71,839	85,522
Average	7,894	27,979	22,600	58,473	995		521	4,982	2,890	1,155	1,570	12,112	236	70,821	84,311
1986	10,734	38,110	14,889	63,733	2,067		1,416	8,504	6,980	3,195	1,725	23,887	255	87,875	104,613
1987	10,339	28,935	24,632	63,906	1,265		1,576	7,892	3,900	3,373	1,920	19,926	196	84,028	100,033
1988	8,105	44,524	37,554	90,183	837		1,128	6,984	3,144	960	1,438	14,491	208	104,882	124,859
1989	9,570	40,329	24,282	74,181	653		1,060	4,596	3,736	860	2,888	13,793	240	88,214	105,016
1990	7,443	52,142	22,619	82,204	676		1,328	2,364	2,256	643	1,515	8,781	179	91,164	108,529
Average	9,238	40,808	24,795	74,841	1,100		1,302	6,068	4,003	1,806	1,897	16,175	216	91,232	108,610
1991	9,690	51,645	23,206	84,541	878	5,897	800	2,620	1,948	598	680	13,421	134	98,096	108,995
1992	5,344	55,889	34,129	95,362	1,579	5,284	1,556	3,496	1,384	375	543	14,217	99	109,678	121,864
1993	13,130	66,125	58,962	138,217	899	4,472	2,120	4,272	1,556	758	905	14,982	259	153,458	170,508
1994	14,801	48,368	33,094	96,263	1,263	6,795	1,144	4,623	1,552	403	765	16,545	207	113,015	125,572
1995	22,431	33,805	16,784	73,020	4,429	3,790	686	3,088	2,309	543	438	15,282	144	88,446	98,273
Average	13,079	51,166	33,235	97,481	1,810	5,248	1,261	3,620	1,750	535	666	14,889	169	112,538	125,043
1996	14,179	79,019	23,886	117,084	1,915	4,997	670	4,668	1,587	550	743	15,130	284	132,498	147,220
1997	11,796	114,938	28,185	154,919	1,837	7,728	586	2,970	1,088	330	615	15,154	357	170,430	189,367
1998	5,439	31,039	28,567	65,045	1,245	3,337	974	4,132	1,564	393	446	12,091	132	77,268	85,853
1999	8,745	20,545	25,968	55,258	1,523	2,298	1,210	3,914	1,968	530	968	12,411	300	67,063	74,514
2000	5,452	30,014	27,531	62,997	1,926	1,922	1,286	5,872	3,204	578	913	15,701	137	78,835	87,594
Average	9,122	55,111	26,827	91,061	1,689	4,056	945	4,311	1,882	476	737	14,097	242	105,219	116,910
2001	7,372	41,179	63,392	111,943	672	4,268	2,260	10,500	5,139	800	1,029	24,668	147	136,758	151,953
2001 CHANGE FROM 2000															
Number	1,920	11,165	35,861	48,946	-1,254	2,346	974	4,628	1,935	222	116	8,967	10	57,923	64,359
Percent	35%	37%	130%	78%	-65%	122%	76%	79%	60%	38%	13%	57%	7%	73%	73%
Goals	Under review				Under review										
Lower	4,400	30,000	14,000	48,400	500	2,000	650	2,600	1,800	625	625	8,800	120	57,320	63,689
Point	6,800	36,000	17,500	60,300	600	2,000	850	3,500	2,100	750	750	10,550	150	71,000	78,889
Upper	9,200	55,000	28,000	92,200	1,000	2,000	1,500	5,600	3,600	1,250	1,250	16,200	240	108,640	120,711
AVERAGE PERCENT OF POINT GOAL															
Year	Alsek	Taku	Stikine	Major Sub T.	Situk	Chilkat	Andrew	Unuk	Chickamin	Blossom	Keta	Med. Sub T	King Salmon	TOTAL ALL	
75-80	162%	67%	71%	76%	201%		47%	105%	60%	34%	85%	57%	73%	73%	
81-85	116%	78%	129%	97%	166%		61%	142%	138%	154%	209%	115%	157%	100%	
86-90	136%	113%	142%	124%	183%		153%	173%	191%	241%	253%	153%	144%	128%	
91-95	192%	142%	190%	162%	302%	262%	148%	103%	83%	71%	89%	141%	112%	159%	
96-00	134%	153%	153%	151%	282%	203%	111%	123%	90%	63%	98%	134%	161%	148%	

^a Numbers in bold type are weir counts or mark-recapture estimates and are not expanded.

^b Index escapements are expanded for survey counting rates and unsurveyed tributaries.

^c Alsek escapement = (weir count X 4.0) minus above weir harvest.

^d Taku escapement = 5 trib. count X 5.2.

^e Stikine escapement = L. Tahltan count X 5.15.

^f Region total expanded for 84% without Chilkat River, 90% with Chilkat escapement included.

Table 2. Southeast Alaska winter troll fishery chinook catches, vessel landings, and catch per landing, by troll accounting year (October–September), years ending 1980–2001.^a

Year	---Early Winter (Oct.-Dec.)---			---Late Winter (Jan.-Apr. 14)---			--Total Winter (Oct. - Apr. 14)--			Winter % of	
	Chinook	Landings	Catch/ Landing	Chinook	Landings	Catch/ Landing	Chinook	Landings	Catch/ Landing	Annual Troll Total	Annual Total
1980	4,002	528	8	3,608	406	9	7,610	934	8	303,874	3%
1981	1,737	279	6	7,027	744	9	8,764	1,023	9	248,791	4%
1982	4,865	535	9	6,857	764	9	11,722	1,299	9	242,315	5%
1983	12,517	926	14	17,340	1,424	12	29,857	2,350	13	269,790	11%
1984	14,223	1,217	12	17,153	1,980	9	31,376	3,197	10	235,699	13%
1985	14,235	1,016	14	7,234	1,090	7	21,469	2,106	10	216,089	10%
1986	16,779	1,202	14	6,147	832	7	22,926	2,034	11	237,698	10%
1987	18,453	1,404	13	10,075	994	10	28,528	2,398	12	242,562	12%
1988	44,774	2,626	17	15,684	1,784	9	60,458	4,410	14	231,185	26%
1989	24,426	2,354	10	9,872	1,402	7	34,298	3,756	9	235,609	15%
1990	17,617	1,128	16	15,513	1,476	11	33,130	2,604	13	287,100	12%
1991	19,920	1,094	18	20,622	1,915	11	40,542	3,009	13	263,091	15%
1992	28,277	1,952	14	43,554	2,673	16	71,831	4,625	16	183,354	39%
1993	20,275	1,210	17	42,447	2,365	18	62,722	3,575	18	226,561	28%
1994	35,193	1,132	31	21,175	1,498	14	56,368	2,630	21	186,167	30%
1995	10,382	642	16	7,486	871	9	17,868	1,513	12	138,115	13%
1996	6,008	430	14	3,393	447	8	9,401	877	11	141,334	7%
1997	13,252	627	21	7,705	524	15	20,957	1,151	18	246,462	9%
1998	9,783	578	17	23,021	1,423	16	32,804	2,001	16	191,983	17%
1999	13,989	594	24	16,988	1,432	12	30,977	2,026	15	145,898	21%
2000	17,494	813	22	18,561	1,486	12	36,055	2,299	16	158,717	23%
2001	11,198	939	12	11,384	1,359	8	22,582	2,298	10	153,218	15%

^a Includes Annette Island troll catch.

Table 3. The number of salmon harvested and permits fished in the 2001 spring (experimental and terminal) troll fisheries.^a

FISHERY NAME	Week	Open	Close	Days	Permits	Chinook	Alaska Hatchery %
Experimental Fisheries							
West Rock Area 101-21	21	5/21	5/22	2			
	22	5/29	5/30	2			
	23	6/4	6/6	3			
	24	6/10	6/13	4			
	25	6/18	6/20	3			
	26	6/25	6/27	3	CONFIDENTIAL		
West Rock Total:					CONFIDENTIAL		
Gravina Is. Area 101-29	18	4/30	5/1	2			
	19	5/7	5/8	2			
	20	5/14	5/16	3	CONFIDENTIAL		
	21	5/21	5/25	5	5	46	84%
	22	5/28	6/2	6	9	253	24%
	23	6/3	6/9	7	13	399	25%
	24	6/10	6/16	7	11	294	0%
	25	6/17	6/23	7	15	894	24%
	26	6/24	6/30	7	5	120	69%
Gravina Is. Total:					59	2,015	35%
Mountain Point Area 101-45	18	4/30	5/5	6	4	16	0%
	19	5/6	5/12	7	CONFIDENTIAL		
	20	5/13	5/19	7	4	17	55%
	21	5/20	5/26	7	6	77	68%
	22	5/27	6/2	7	6	43	100%
	23	6/3	6/9	7	8	235	60%
	24	6/10	6/16	7	22	1039	73%
	25	6/17	6/23	7	17	1209	32%
	26	6/24	6/30	7	9	248	71%
	27	7/7	7/7	1	CONFIDENTIAL		
	28	7/8	7/15	8	7	238	61%
Mountain Point Total					86	3,155	55%
West Behm Canal Area 101-90	18	4/30	5/1	2			
	19	5/7	5/8	2			
	20	5/14	5/15	2			
	21	5/21	5/22	2			
	22	5/29	5/30	2			
	23	6/4	6/6	3	CONFIDENTIAL		
	24	6/10	6/13	4	CONFIDENTIAL		
	25	6/18	6/20	3	CONFIDENTIAL		
	25	6/22	6/23	1	CONFIDENTIAL		
	26	6/24	6/30	7	CONFIDENTIAL		
West Behm Canal Total					5	117	100%
Ship Is. Shore Area 102-80	20	5/14	5/15	2			
	21	5/21	5/22	2			
	22	5/29	5/31	3	CONFIDENTIAL		
	23	6/4	6/5	2			
	24	6/10	6/13	4			
	25	6/18	6/20	3			
	26	6/25	6/27	3			
Ship Is. Shore Total					CONFIDENTIAL		
Sumner St. Area 105-41	18	4/30	5/1	2	6	40	100%
	19	5/7	5/10	4	7	54	22%
	20	5/14	5/16	3	7	78	0%
	21	5/21	5/25	5	8	136	0%
	22	5/28	5/29	2	9	48	42%
	23	6/4	6/6	3	9	118	27%
	24	6/10	6/14	5	4	68	0%
	25	6/18	6/23	6	3	73	0%
	26	6/24	6/30	7	5	29	0%
Sumner St. Total					58	644	29%

-continued-

Table 3. (page 2 of 6)

FISHERY NAME	Week	Open	Close	Days	Permits	Chinook	Alaska Hatchery %
Steamer Point Area 106-30	20	5/14	5/16	3	CONFIDENTIAL		
	21/22	5/18	5/30	13	CONFIDENTIAL		
	23	6/4	6/6	3			
	24	6/10	6/14	5	4	60	0%
	25	6/18	6/20	3	5	119	46%
	25	6/22	6/23	1	CONFIDENTIAL		
	26	6/24	6/30	7	4	95	34%
Steamer Point Total					17	370	38%
Snow Passage Area 106-41	18	4/30	5/1	2			
	19	5/7	5/8	2			
	20	5/14	5/16	3			
	21	5/21	5/23	3	CONFIDENTIAL		
	22	5/28	5/30	3			
	23	6/4	6/6	3			
	24	6/10	6/13	4			
	25	6/18	6/20	3	3	24	0%
	26	6/25	6/27	3			
Snow Passage Total					CONFIDENTIAL		0%
Babbler Pt. Area 107-47	20	5/14	5/15	2			
	21	5/21	5/23	3	6	56	0%
	22	5/29	5/30	2	CONFIDENTIAL		
	23	6/4	6/5	2	4	67	33%
	24	6/10	6/13	4	CONFIDENTIAL		
	25	6/18	6/20	3			
	26	6/25	6/29	5			
Babbler Pt. Total					14	152	16%
Baht Harbor Area 108-30	20	5/14	5/15	2			
	21	5/21	5/22	2	5	50	97%
	22	5/28	6/2	6	5	162	54%
	23	6/3	6/9	7	5	121	16%
	24	6/10	6/16	7	5	144	73%
	25	6/17	6/23	7	4	94	78%
	26	6/24	6/30	7	3	14	0%
Baht Harbor Total					27	585	59%
Little Port Walter Area 109-10	18	4/30	5/1	2			
	19	5/7	5/8	2			
	20	5/17	5/18	2	CONFIDENTIAL		
	21	5/24	5/25	2	CONFIDENTIAL		
	22	5/31	6/1	2	CONFIDENTIAL		
	23	6/7	6/8	2	3	15	0%
	24	6/14	6/15	2	CONFIDENTIAL		
	25	6/20	6/23	4	4	72	58%
	26	6/24	6/30	7	CONFIDENTIAL		
Little Port Walter Total					15	164	51%
Kingsmill Point Area 109-51	18	4/30	5/5	6	6	54	57%
	19	5/6	5/12	7	6	101	0%
	20	5/13	5/19	7	4	111	15%
	21	5/20	5/26	7	12	276	11%
	22	5/27	6/2	7	10	150	51%
	23	6/3	6/9	7	11	306	76%
	24	6/10	6/16	7	16	412	49%
	25	6/17	6/23	7	10	216	25%
	26	6/24	6/30	7	CONFIDENTIAL		
Kingsmill Point Total					75	1,626	42%
Tebenkof Bay Area 109-62	18	4/30	5/1	2	3	69	3%
	19	5/7	5/8	2			
	20	5/14	5/16	3	8	147	40%
	21	5/21	5/23	3	4	139	32%
	22	5/28	5/30	3	11	312	29%
	23	6/4	6/6	3	13	232	19%
	24	6/10	6/13	4	11	340	7%
	25	6/18	6/20	3	8	113	22%
Tebenkof Bay Total					58	1,352	25%

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Table 3. (page 3 of 6)

FISHERY NAME	Week	Open	Close	Days	Permits	Chinook	Alaska
							Hatchery %
Fredrick Sound Area 110-31	16	4/16	4/21	6	4	22	0%
	17	4/22	4/28	7	CONFIDENTIAL		
	18	4/29	5/5	7	CONFIDENTIAL		
	19	5/6	5/12	7	4	22	100%
	20	5/13	5/19	7	6	49	41%
	21	5/20	5/26	7	4	19	0%
	22	5/27	6/2	7	6	103	0%
	23	6/3	6/9	7	3	50	17%
	24	6/10	6/16	7	8	205	21%
	25	6/17	6/23	7	12	110	31%
	26	6/24	6/30	7	3	19	56%
Fredrick Sound Total					53	642	33%
Chatham Strait Area 112-12	16	4/16	4/21	6			
	17	4/22	4/28	7			
	18	4/29	5/5	7	CONFIDENTIAL		
	19	5/6	5/12	7			
	20	5/13	5/19	7	CONFIDENTIAL		
	21	5/20	5/26	7	CONFIDENTIAL		
	22	5/27	6/2	7	4	79	0%
	23	6/3	6/9	7	15	751	68%
	24	6/10	6/16	7	22	944	55%
	25	6/17	6/23	7	53	1,072	83%
	26	6/24	6/30	7	28	582	88%
Chatham Strait Total					126	3,456	66%
Eastern Channel Area 113-35	18	4/29	5/1	3	5	13	0%
	19	5/7	5/8	2	10	53	
	19	5/9	5/12	3	25	188	65%
	20	5/13	5/18	6	27	294	37%
	21	5/21	5/26	6	39	299	74%
	22	5/27	6/2	7	22	219	100%
	23	6/3	6/9	7	45	624	100%
	24	6/10	6/16	7	47	1,109	100%
	25	6/17	6/23	7	55	1,690	83%
	26	6/24	6/30	7	30	185	0%
Eastern Channel Total					305	4,674	86%
Inner Silver Bay Area 113-37	16	4/16	4/21	6	CONFIDENTIAL		
	17	4/22	4/28	7			
	18	4/29	5/5	7	CONFIDENTIAL		
	19	5/6	5/12	7	CONFIDENTIAL		
	20	5/13	5/19	7	10	47	100%
	21	5/20	5/26	7	9	81	100%
	22	5/27	6/2	7	6	48	100%
	23	6/3	6/9	7	7	67	48%
	24	6/10	6/16	7	10	203	100%
	25	6/17	6/23	7	7	140	74%
	26	6/24	6/30	7	5	110	100%
	27	7/1	7/7	7	CONFIDENTIAL		
	28	7/8	7/14	7	CONFIDENTIAL		
Inner Silver Bay Total					61	730	93%
Middle Island Area 113-41	16	4/16	4/17	2			
	17	4/23	4/24	2	CONFIDENTIAL		
	18	4/30	5/1	2	CONFIDENTIAL		
	19	5/7	5/8	2			
	20	5/14	5/16	3	19	319	23%
	21	5/21	5/23	3	19	225	66%
	22	5/28	6/2	6	24	241	1%
	23	6/3	6/8	6	12	66	57%
	24	6/11	6/15	5	CONFIDENTIAL		
	25	6/18	6/21	4	CONFIDENTIAL		
	25	6/22	6/23	1	CONFIDENTIAL		
	26	6/24	6/30	7	39	1,259	17%
Middle Island Total					120	2,135	30%

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Table 3. (page 4 of 6)

FISHERY NAME	Week	Open	Close	Days	Permits	Chinook	Alaska
							Hatchery %
Salisbury Sound	16	4/16	4/17	2			
Area 113-62	17	4/23	4/24	2			
	18	4/30	5/1	2			
	19	5/7	5/8	2			
	20	5/14	5/15	2	5	43	0%
	21	5/21	5/22	2	9	79	33%
	22	5/29	5/30	2	4	50	43%
	23	6/4	6/7	4	CONFIDENTIAL		
	24	6/10	6/13	4	CONFIDENTIAL		
	25	6/18	6/19	2	6	94	
	25	6/20	6/23	3	8	268	59%
	26	6/24	6/30	7	11	154	23%
Salisbury Sound Total					45	701	33%
Lisianski Inlet	20	5/14	5/15	2	CONFIDENTIAL		
Area 113-95	21	5/21	5/23	3	13	240	33%
	22	5/28	5/31	4	19	384	34%
	23	6/4	6/7	4	14	274	60%
	24	6/10	6/14	5	11	504	29%
	25	6/18	6/23	6	18	635	37%
	26	6/24	6/30	7	15	287	26%
Lisianski Inlet Total					92	2,410	35%
Cross Sound	24	6/11	6/15	5	9	214	25%
Area 114-21	25	6/18	6/22	5	21	303	41%
	26	6/25	6/29	5	20	100	0%
Cross Sound Total					50	617	32%
South Passage	18	4/30	5/1	2	CONFIDENTIAL		
Area 114-23	19	5/7	5/8	2			
	20	5/14	5/15	2	CONFIDENTIAL		
	21	5/21	5/22	2			
	22	5/28	5/29	2	CONFIDENTIAL		
	23	6/4	6/5	2			
	24	6/11	6/12	2	CONFIDENTIAL		
	25	6/18	6/19	2	CONFIDENTIAL		
	26	6/25	6/29	5			
South Passage Total					6	49	7%
Homesore	18	4/30	5/1	2	8	49	15%
Area 114-25	19	5/7	5/8	2	CONFIDENTIAL		
	20	5/14	5/15	2	19	290	14%
	21	5/21	5/22	2	6	29	69%
	22	5/28	5/29	2	10	124	21%
	23	6/4	6/5	2	21	447	33%
	24	6/10	6/12	3	22	459	52%
	25	6/18	6/19	2	10	106	40%
	26	6/25	6/29	5	CONFIDENTIAL		
Homesore Total					99	1,520	34%
Pt. Sophia	16	4/16	4/21	6	3	5	0%
Area 114-27	17	4/22	4/28	7	5	9	0%
	18	4/29	5/5	7	7	23	0%
	19	5/6	5/12	7	7	16	0%
	20	5/13	5/19	7	8	24	90%
	21	5/20	5/26	7	16	96	23%
	22	5/27	6/2	7	11	42	53%
	23	6/3	6/9	7	8	160	39%
	24	6/10	6/16	7	13	203	73%
	25	6/17	6/23	7	20	296	80%
	26	6/24	6/30	7	14	67	77%
Pt. Sophia Total					112	941	64%

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Table 3. (page 5 of 6)

FISHERY NAME	Week	Open	Close	Days	Permits	Chinook	Alaska Hatchery %
<u>Terminal Fisheries</u>							
Nakat Inlet	22	6/1	6/2	2	0	0	
Area 101-10	23	6/3	6/9	7	0	0	
	24	6/10	6/16	7	0	0	
	25	6/17	6/23	7	0	0	
	26	6/24	6/30	7	0	0	
Nakat Inlet Total							
Neets Bay	18	5/1	5/5	5	0	0	-
Area 101-95	19	5/6	5/12	7	0	0	-
	20	5/13	5/19	7	0	0	-
	21	5/20	5/26	7	CONFIDENTIAL		
	22	5/27	6/2	7	CONFIDENTIAL		
	23	6/3	6/9	7	0	0	-
	24	6/10	6/16	7	0	0	-
	25	6/17	6/23	7	0	0	-
	26	6/24	6/30	7	0	0	-
	27	7/1	7/7	7			
	28	7/8	7/14	7			
	29	7/15	7/21	7	CONFIDENTIAL		
	30	7/22	7/28	7			
	31	7/29	8/4	7	CONFIDENTIAL		
	32	8/5	8/11	7	CONFIDENTIAL		
Neets Bay Total							
Wrangell Narrows	22	6/1	6/2	2	14	156	100%
Area 106-44	23	6/3	6/9	7	30	521	100%
	24	6/10	6/16	7	23	387	100%
	25	6/17	6/23	7	20	667	100%
	26	6/24	6/30	7	14	217	100%
Wrangell Narrows Total					101	1,948	100%
Earl West Cove	24	6/15	6/16	2	CONFIDENTIAL		
Area 107-45	25	6/17	6/23	7	CONFIDENTIAL		
	26	6/24	6/30	7	0	0	-
Earl West Cove Total							
Hidden Falls	16	4/16	4/21	6	0	0	-
Area 112-22	17	4/22	4/28	7	0	0	-
	18	4/29	5/5	7	0	0	-
	19	5/6	5/12	7	CONFIDENTIAL		
	20	5/13	5/19	7	0	0	-
	21	5/20	5/26	7	CONFIDENTIAL		
	22	5/27	6/2	7	9	272	100%
	23	6/3	6/9	7	28	1,094	100%
	24	6/10	6/16	7	39	1,395	100%
	25	6/17	6/23	7	32	679	100%
	26	6/24	6/30	7	17	190	100%
	27	7/1	7/7	7			
	28	7/8	7/14	7	CONFIDENTIAL		
	29	7/15	7/21	7	CONFIDENTIAL		
	30	7/22	7/28	7			
	31	7/29	8/4	7			
	32	8/5	8/11	7			
	33	8/12	8/15	4			
	34	8/19	8/25	7			
	35	8/26	9/1	7			
	36	9/2	9/8	7			
	37	9/9	9/15	7			
	38	9/16	9/20	5			
Hidden Falls Total					127	3,642	100%

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Table 3. (page 6 of 6)

Spring Fishery Totals:	Permits		Chinook	Alaska Hatchery %
	Fished	Days		
Experimental	397	988	28,192	50%
Terminal	100	255	7,081	98%
Spring Fishery Total	438	1243	35,273	60%

^a Catches omitted from weeks where less than 3 permits made landings. Therefore, totals may not reflect the sum of weekly values.

Table 4. Estimated harvest and Alaska hatchery add-on/terminal exclusion of chinook salmon by commercial and sport fisheries in Southeast Alaska, 2001.

		Common		Alaska Wild Total Contribution			Terminal	
		Total	Property	General				
Fishery		Catch	Catch	Fisheries	Terminal	Subtotal	Exclusion	Treaty
Wild Terminal Exclusion Catches								
Gillnet	Stikine	0	0	0	0	0	0	0
	Taku	1,111	1,111	0	0	0	0	1,708
Setnet	Yakutat	2,631	2,000	0	631	631	631	2,000
Sport	Stikine	3,005	2,302	0	703	703	703	2,302
	Taku	1,437	1,437	0	0	0	0	1,857
	Yakutat	394	200	0	194	194	194	200
Total Terminal Exclusion		8,578	7,050	0	1,528	1,528	1,528	7,050
		Common		Alaska Hatchery Total Contribution			Terminal	
Fishery		Total	Property	General				
		Catch	Catch	Fisheries	Terminal	Subtotal	Addon	Treaty
Annette Island Catches								
Seine		709	709	173	0	173	142	567
Gillnet		3,447	3,447	2,252	0	2,252	1,845	1,602
Trap		0	0	0	0	0	0	0
Troll		0	0	0	0	0	0	0
Total Annette Island		4,156	4,156	2,425	0	2,425	1,987	2,169
General Purse Seine and Gillnet								
Seine		19,730	5,016	104	14,714	14,818	14,799	4,931
Gillnet		11,274	5,351	2,615	5,923	8,538	8,066	3,208
Setnet		2	2	0	0	0	0	2
Total Net Fisheries (including Annette Island)		38,904	17,636	5,144	21,268	26,412	25,483	13,421
Troll								
Winter Fishery								
	Oct 11-Dec 31	11,198		1,105	0	1,105	906	10,292
	Jan 1-Apr 14	11,388		1,700	0	1,700	1,393	9,995
Winter Total		22,586		2,806	0	2,806	2,299	20,287
Spring Fishery								
	Spring Hatchery	28,250		13,726	0	13,726	11,248	17,002
	Hatchery Access	0		0	0	0	0	0
	Terminal	7,081		0	6,922	6,922	6,922	159
Spring Total		35,331		13,726	6,922	20,648	18,170	17,161
Summer Fishery								
	July 1-6	64,854		3,700	0	3,700	3,032	61,822
	Aug 18-Sep 5	30,509		1,327	0	1,327	1,087	29,422
Summer Total		95,363		5,027	0	5,027	4,119	91,244
Total Troll (including Annette Island)		153,280		21,558	6,922	28,480	24,588	128,692
Sport Fishery								
Traditional		67,455	55,747	18,257	11,708	29,965	26,669	40,786
Total Sport *		72,291	59,686	18,257	12,605	30,862	27,566	44,725
Grand Totals *		264,475		44,960	40,795	85,755	77,637	186,838
					Hatchery Base			5,000
					Risk Adjustment Factor			3,118
					Wild Terminal Exclusion			1,528
					Alaska Hatchery Add-on			76,109

Table 5. Chinook salmon catch per fleet day (rounded to nearest hundred) in the Southeast Alaska troll fishery during the general summer season, April 15–September 30, 1984–2001.^a

Year	Fishing Period	Number of Days	Chinook Catch	Fish Per Fleet Day	Chinook Abundance Index ^b
1984	Jun 5-30 Jul 11-29	26	130,000	5,000	1.34
		19	77,000	4,100	
		45	207,000	4,600	
1985	Jun 3-12 Jul 1-22 Aug 25-26	10	66,000	6,600	1.27
		22	114,000	5,200	
		2	13,000	8,300	
1986	Jun 20 - Jul 15 Aug 21 - 26 Sep 1 - 9	34	193,000	5,700	1.48
		26	155,000	6,000	
		6	31,900	5,300	
1987	Jun 20 - Jul 12	9	27,500	3,000	1.78
		41	214,400	5,200	
		23	209,000	9,100	
1988	Jul 1-12	12	162,000	13,500	2.04
1989	Jul 1-13	13	167,000	12,800	1.85
1990	Jul 1-22 Aug 23-24	22	200,000	9,100	1.84
		2	12,000	3,000	
		24	212,000	8,800	
1991	Jul 1-8	8	154,000	20,500	1.82
1992	Jul 1-4 Aug 23	4	66,000	18,900	1.65
		1	7,000	7,000	
		4.5	73,000	16,200	
1993	Jul 1-6 Aug 21-25 Sep 12-20	6	101,000	16,800	1.71
		5	25,000	5,000	
		9	19,000	2,100	
1994	Jul 1-7 Aug 29 - Sep 2	20	145,000	7,200	1.55
		7	98,000	14,000	
		5	20,000	4,000	
1995	Jul 1-10 Jul 30 - Aug 5	12	118,000	9,800	0.99
		10	76,000	7,600	
		7	21,000	3,000	
1996	Jul 1 - 10 Aug 19 - 20	17	97,000	5,700	0.9
		10	76,000	7,600	
		2	8,000	4,000	
1997	Jul 1-7 Aug 18 - 24 Aug 30 - Sep 5	12	84,000	7,000	1.37
		7	122,000	17,400	
		7	38,000	5,400	
1998	Jul 1 - 11 Aug 20 - Sep 30	7	22,000	3,100	1.25
		21	182,000	8,700	
		11	103,000	9,400	
1999	Jul 1 - 6 Aug 18 - Aug 22	42	36,000	960	1.16
		53	139,000	2,600	
		6	78,000	13,000	
2000	Jul 1 - 5 Aug 11 - 12 Aug 23 - 30 Sep 12 - 20	5	16,000	3,200	1.14
		11	94,000	8,500	
		5	52,100	10,420	
2001	Jul 1-6 Aug 18 - Sept 5	2	11,300	5,650	1.14
		8	24,900	3,110	
		9	5,500	610	
2001	Jul 1-6 Aug 18 - Sept 5	24	93,800	3,910	1.14
		6	64,854	10,809	
		19	30,509	1,606	
		24	95,363	3,810	

^a The general summer fishery does not include experimental, terminal, or hatchery access fisheries, which target Alaska hatchery stocks.

^b Abundance index is estimated by the chinook technical committee of the Pacific Salmon Commission.

Table 6. Number of days, effort (boat days) and dates the Southeast Alaska troll fishery was open [chinook retention (CR)], closed to chinook salmon fishing [chinook non-retention (CNR)], and closed to all species (all) during the general summer season, April 15–September 30, 1978–2001.

Year	Open Periods					Closed Periods			
	Days ^a Open	Days Closed	Dates Open	CR Days	CR Effort in Boat Days ^b	Closed Periods	Number of Days	CNR Days	CNR Effort in Boat Days ^b
1978	169	0	Apr 15-Sep-30	169		None		0	
1979	169	0	Apr 15-Sep-30	169		None		0	
1980	149	20	Apr 15-Jul-14 Jul-25-Sep-20	91 58		Jul-15-Jul-24 Sep-21-Sep-30	10 (all) 10 (all)	0	
1981	101	69	May 15-Jun-25 July 5-Aug-06 Aug 20-Sep-03 Sep-13-Sep-20	42 36 15 8	76,691	Apr-15-May-14 Jun-26-Jul-04 Aug-10-Aug-19 Sep-04-Sep-12 Sep-21-Sep-30	30 (all) 9 (all) 10 (all) 9 10 (all)	9	3,526
1982	65	104	May 15-Jun-06 Jun-17-Jul-28	23 42	53,371	Apr-15-May-14 Jun-07-Jun-16 Jul-29-Aug-07 Aug-08-Sep-20 Sep-21-Sep-30	30 (all) 10 (all) 10 (all) 44 10 (all)	44	32,727
1983	60	109	May 15-Jun-08 July 1-Aug-04	25 35	48,734	Apr-15-May-14 Jun-09-Jun-30 Aug-05-Aug-14 Aug-15-Sep-20 Sep-21-Sep-30	30 (all) 22 (all) 10 (all) 37 10 (all)	37	18,385
1984	45	124	June 5-Jun-30 Jul-11-Jul-29	26 19	33,641	Apr-15-Jun-04 Jul-01-Jul-10 Jul-30-Aug-14 Aug-15-Aug-24 Aug-25-Sep-20 Sep-21-Sep-30	51 (all) 10 (all) 16 10 (all) 27 10 (all)	43	29,583
1985	33.6	135.4	June 3-Jun-12 July 1-Jul-22 Aug 25-Aug 26 ^c	10 22 1.6	30,628	Apr-15-Jun-02 Jun-13-Jun-30 Jul-23-Aug-14 Aug-15-Aug-24 Aug-26-Sep-20 Sep-21-Sep-30	49 (all) 18 (all) 23 10 (all) 25.4 10 (all)	48.4	35,725
1986	41	128	Jun-20-Jul-15 Aug 21-Aug-26 Sept 1-Sep-09	26 6 9	33,079	Apr-15-Jun-19 Jul-16-Aug-10 Aug-11-Aug-20 Aug-27-Aug-31 Sep-10-Sep-20 Sep-21-Sep-30	66 (all) 26 10 (all) 5 11 10 (all)	42	34,173
1987	23	146	Jun-20-Jul-12	23	19,077	Apr-15-Jun-19 Jul-13-Aug-02 Aug-03-Aug-12 Aug-13-Sep-20 Sep-21-Sep-30	66 (all) 21 10 (all) 39 10 (all)	60	37,214

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Table 6. (page 2 of 3)

Year	Open Periods					Closed Periods			
	Days ^a Days		CR Days	CR Effort in		Number		CNR Effort in	
	Open	Closed		Dates Open	Boat Days ^b	Closed Periods	of Days	CNR Days	Boat Days ^b
Year	Open Periods					Closed Periods			
	Days ^a Days		CR Days	CR Effort in		Number		CNR Effort in	
	Open	Closed		Dates Open	Boat Days ^b	Closed Periods	of Days	CNR Days	Boat Days ^b
1988	12	157	July 1-Jul-12	12	9,507	Apr-15-Jun-30 Jul-13-Jul-25 Jul-26-Aug-04 Aug-05-Aug-14 Aug-15-Aug-24 Aug-25-Aug-31 Sep-01-Sep-03 Sep-04-Sep-20 Sep-21-Sep-30	77 (all) 13 10 (all) 10 10 (all) 7 3 (all) 17 ^d 10 (all)	47	27,275
1989 ^e	13	156	July 1-Jul-13	13	9,585	Apr-15-Jun-30 Jul-14-Aug-13 Aug-14-Aug-23 Aug-24-Sep-20 Sep-21-Sep-30	77 (all) 31 10 (all) 28 10 (all)	59	38,404
1990 ^e	24	145	July 1-Jul-22 Aug 23-Aug-24	22 2	17,172	Apr-15-Jun-30 Jul-23-Aug-12 Aug-13-Aug-22 Aug-25-Sep-20 Sep-21-Sep-30	77 (all) 21 10 (all) 27 10 (all)	48	29,525
1991 ^e	7.5	161.5	July 1-Jul-08	7.5	4,718	Apr-15-Jun-30 Jul-08-Aug-15 Aug-16-Aug-24 Aug-25-Sep-20 Sep-21-Sep-30	77 (all) 38.5 10 (all) 26 10 (all)	64.5	32,565
1992 ^e	4.5	164.5	July 1-Jul-04 Aug-23-Aug-24	3.5 1	2,881	Apr-15-Jun-30 Jul-04-Aug-12 Aug-13-Aug-22 Aug-24-Sep-20 Sep-21-Sep-30	77 (all) 39.5 10 (all) 28 10 (all)	67.5	36,306
1993 ^e	20	149	Jul-01-Jul-06 Aug-21-Aug-25 Sept. 12-Sep-20	6 5 9	12,036	Apr-15-Jun-30 Jul-07-Jul-11 Jul-12-Aug-12 Aug-13-Aug-20 Aug-26-Sep-11 Sep-21-Sep-30	77 (all) 5 (all) 32 8 (all) 17 10 (all)	49	30,502
1994 ^e	12	157	Jul-01-Jul-07 Aug-29-Sep-02	7 5	6,434	Apr-15-Jun-30 Jul-08-Aug-26 Aug-27-Aug-28 Sep-03-Sep-30	77 (all) 52 2 (all) 28	80	35,716

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Table 6. (page 3 of 3)

Year	Open Periods					Closed Periods			
	Days ^a Days		CR Effort in			Number		CNR Effort in	
	Open	Closed	Dates Open	CR Days	Boat Days ^b	Closed Periods	of Days	CNR Days	Boat Days ^b
1995	17	152	Jul-01-Jul-10	10		Apr-15-Jun-30	77 (all)		
						Jul-11-Jul-29	19		
			Jul-30-Aug-05	7	8,420	Aug-06-Aug-12	7		
						Aug-13-Aug-22	10 (all)		
						Aug-23-Sep-30	39	65	23,435
1996	12	157	Jul-01-Jul-10	10		Apr-15-Jun-30	77 (all)		
						Jul-11-Aug-14	35		
			Aug-19-Aug-20	2	5,282	Aug-15-Aug-19	5 (all)		
						Aug-21-Sep-20	30		
						Sep-21-Sep-30	10 (all)	65	23,167
1997	21	148	Jul-01-Jul-07	7		Apr-15-Jun-30	77(all)		
						Jul-08-Aug-07	30		
			Aug-18-Aug-24	7		Aug-08-Aug-17	10(all)		
			Aug-30-Sep-05	7	9,126	Aug-25-Aug-29	5		
						Sep-06-Sep-20	14 ^f	49	17,653
1998	53	116	Jul-01-Jul-11	11		Apr-15-Jun-30	77(all)		
						Jul-12-Aug-11	30		
			Aug-20-Sep-30	42	12,517	Aug-12-Aug-19	8(all)	30	11,928
1999	11	158	Jul-01-Jul-06	6		Apr-15-Jun-30	77(all)		
						Jul-07-Aug-12	36		
			Aug-18-Aug-22	5	4,624	Aug-13-Aug-17	5(all)		
						Aug-23-Sep-30	39	75	21,581
2000	24		Jul-01-Jul-05	5		Apr-15-Jun-30	77(all)		
			Aug-11-Aug-12	2		Jul-06-Aug-10	36		
			Aug-23-Aug-30	8		Aug-13-Aug-22	10(all)		
			Sep-12-Sep-20	9	6,618	Aug-31-Sep-11	12	48	15,612
2001	25		Jul-01-Jul-06	6		Apr-15-Jun-30	77(all)		
						Jul-07-Aug-12	37		
			Aug-18-Sep-05	19	10,788	Aug-13-Aug-17	5(all)		
						Sep-06-Sep-30	25		
						Sep-21-Sep-24	4(all)	58	27,881

^a Number of days the major portion of Southeast Alaska was open to chinook salmon fishing.

^b Summer total of boat days estimated from inseason dockside interviews with troll fishers and actual landings from fish tickets tabulated postseason.

^c Trolling was open to all species for 39 hours, 12:01 am Aug 25 to 3:00 pm Aug 26.

^d In 1988, the southern areas of southeast Alaska were closed due to coho conservation concerns.

^e Hatchery access fisheries were conducted for 6 days each year in June, except in 1991, when only 4.5 were open.

^f In 1997, the northern areas of southeast Alaska were closed due to coho conservation concerns.

Table 7. Contribution in numbers and percent of Alaska hatchery chinook salmon in the winter, experimental, terminal, hatchery access, and general summer troll fisheries, 1989–2001.

Fishery	Year	Total Catch ^a	Alaskan Hatcheries	
			Number	Percent
Winter	1989	34,300	4,915	14%
	1990	33,100	4,433	13%
	1991	42,600	10,246	24%
	1992	71,800	6,977	10%
	1993	62,700	3,862	6%
	1994	56,400	1,957	3%
	1995	17,900	2,131	12%
	1996	9,400	1,653	18%
	1997	20,900	1,740	8%
	1998	32,800	2,362	7%
	1999	31,000	2,172	7%
	2000	36,000	3,067	9%
	2001	22,586	2,806	12%
		<i>average</i>		<i>11%</i>
Experimental	1989	2,500	854	34%
	1990	7,100	4,250	60%
	1991	14,000	6,159	44%
	1992	11,200	5,378	48%
	1993	15,800	6,574	42%
	1994	11,300	4,922	44%
	1995	21,700	13,987	64%
	1996	31,000	14,900	48%
	1997	33,200	13,500	41%
	1998	19,200	5,001	26%
	1999	18,000	8,626	48%
	2000	20,800	10,966	53%
	2001	28,250	13,726	49%
		<i>average</i>		<i>46%</i>
Terminal ^b	1989	900	900	100%
	1990	16	16	100%
	1991	5,900	5,900	100%
	1992	4,100	4,100	100%
	1993	2,800	2,800	100%
	1994	100	100	100%
	1995	1,300	1,300	100%
	1996	16,400	16,400	100%
	1997	9,500	9,500	100%
	1998	1,300	1,300	100%
	1999	2,000	2,367	100%
	2000	7,950	1,557	100%
	2001	7,081	6,922	100%

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Table 7. (page 2 of 2)

Fishery	Year	Total Catch ^a	Alaskan Hatcheries	
			Number	Percent
Hatchery				
Access	1989	31,200	5,606	18%
	1990	34,900	6,712	19%
	1991	46,500	8,577	18%
	1992	23,800	6,459	27%
		<i>average</i>		<i>21%</i>
General				
Summer	1989	167,000	5,225	3%
	1990	212,000	14,281	7%
	1991	154,000	6,606	4%
	1992	72,600	2,460	3%
	1993	145,200	4,931	3%
	1994	118,400	5,341	5%
	1995	97,200	9,724	10%
	1996	84,600	4,800	6%
	1997	182,800	4,200	2%
	1998	138,700	3,700	3%
	1999	94,000	3,700	4%
	2000	93,760	6,881	7%
	2001	95,363	5,027	5%
		<i>average</i>		<i>5%</i>
Total ^c	1989	235,900	17,500	7%
	1990	287,116	29,692	10%
	1991	263,000	37,488	14%
	1992	183,500	25,374	14%
	1993	226,500	18,167	8%
	1994	186,200	12,320	7%
	1995	138,100	27,142	20%
	1996	141,400	37,753	27%
	1997	246,400	28,940	12%
	1998	192,000	12,363	6%
	1999	146,000	16,865	12%
	2000	158,717	28,944	18%
	2001	153,280	28,480	19%
		<i>average</i>		<i>13%</i>

^a Does not include Annette Island catches.

^b Terminal areas are accounted as 100% Alaskan hatchery.

^c Totals may not agree with other totals due to rounding

Table 8. Minimum estimated contribution of hatchery chinook salmon to sampled marine boat sport fisheries of Southeast Alaska, 2001.^a

Region or Hatchery	Marine Boat Sport Fishery						Total
	Ketchikan ^b	Sitka	Juneau	Craig	Petersburg	Wrangell	
	4/23-9/23	4/23-9/23	4/23-9/23	4/23-9/09	5/07-7/08	4/30-7/01	
British Columbia	56	775	6				837
<i>Nitinat R</i>							0
<i>Robertson Cr</i>				590			590
<i>Conuma</i>							0
Washington	27	668					695
Oregon	12	211					223
Other non-Alaska (not specified)				414			414
Non-Alaska Total	95	1,654	6	1,004	-	-	2,759
Alaska							
Crystal Lake (ADF&G)		244	108		194		546
Crystal Lake/Earl West Cove	109	42				184	335
Crystal Lake/Neets Bay	718	140		191			1,049
Deer Mountain (KIC)	269	5					274
Macaulay Hatchery (DIPAC)		29	2,069				2,098
Hidden Falls (NSRAA)		101	353				454
L. Port Walter (NMFS)	5	36	13	15	12		81
Medvejie (NSRAA)		1,904		146			2,050
Neets Bay (SSRAA)	47	102					149
Sheldon Jackson							0
Tamgas Creek (MIC)	217	209		302			728
Whitman Lake (SSRAA)	2,851	251		53			3,155
Alaska Total	4,216	3,063	2,543	707	206	184	10,919
All Areas Total	4,311	4,717	2,549	1,711	206	184	13,678
Creel Survey Harvest ^c	5,734	20,794	4,498	6,965	861	1,955	40,807
Percent Alaska Hatchery	74%	15%	57%	10%	24%	9%	27%
Percent Total Hatchery	75%	23%	57%	25%	24%	9%	34%

^a Not all expanded to entire area. Craig, Petersburg, and Wrangell hatchery contribution estimates are based on catch sampling programs only. Additional terminal area Alaska hatchery harvests included about 1,500 (Gastineau/Snettisham) in the Juneau area and 3,500 (Crystal Lake) in the Petersburg area.

^b Ketchikan estimates are biased low because a major access site (Salmon Falls) was not sampled.

^c All harvest numbers are preliminary, pending results of the Statewide Harvest Survey

Table 9. Annual Southeast Alaska commercial and recreational chinook salmon harvests and Alaska hatchery contributions, in thousands of fish, 1965–2001.

Year	Commercial Fisheries			Sport Fisheries ^c	Total	Alaska Hatchery Harvest	% Alaska Hatchery	Total Less AK Hatchery
	Troll ^a	Net ^b	Subtotal					
1965	309	28	337	13	350			
1966	282	26	308	13	321			
1967	275	26	301	13	314			
1968	304	27	331	14	345			
1969	290	24	314	14	328			
Ave. 1965-69	292	26	318	13	332			
1970	305	18	323	14	337			
1971	311	23	334	15	349			
1972	242	44	286	15	301			
1973	308	36	344	16	360			
1974	322	24	346	17	363			
Ave. 1970-74	298	29	327	15	342			
1975	287	13	300	17	317			
1976	231	10	241	17	258			
1977	272	13	285	17	302			
1978	375	25	400	17	417			
1979	338	28	366	17	383			
Ave. 1975-79	301	18	318	17	335			
1980	304	20	324	20	344	7	2%	337
1981	249	19	268	21	289	2	1%	287
1982	242	48	290	26	316	1	0%	315
1983	270	19	289	22	311	2	1%	309
1984	236	32	268	22	290	5	2%	285
Ave. 1980-84	260	28	288	22	310	3	1%	307
1985	216	33	252	25	276	14	5%	263
1986	238	22	260	23	283	18	6%	265
1987	243	16	258	24	282	24	9%	258
1988	231	22	252	26	278	30	11%	248
1989	236	24	260	31	291	34	12%	257
Ave. 1985-89	233	23	256	26	282	24	9%	258
1990	288	28	315	51	366	62	17%	304
1991	264	35	296	60	356	70	20%	286
1992	184	32	215	43	259	45	17%	214
1993	227	28	254	49	303	39	13%	264
1994	186	36	222	42	264	38	14%	226
Ave. 1990-94	230	32	260	49	310	51	16%	259
1995	138	48	186	50	236	66	28%	170
1996	141	37	178	42	221	75	34%	146
1997	246	25	271	70	340	55	16%	285
1998	192	24	216	55	271	33	12%	239
1999	146	33	179	72	251	50	20%	185
Ave. 1995-99	173	33	206	58	264	56	22%	205
2000	159	41	200	63	263	84	32%	179
2001	153	39	192	72	264	86	33%	178

^a Troll catches prior to 1980 are reported by calendar year. From 1981-1990, catches are for the catch accounting year, October 1 to September 30.

^b Purse seine chinook catches reported under net fisheries for 1986–1991 do not include chinook less than five pounds reported on fish tickets.

^c Estimates of sport catches for 1965–1976 based on 1977–1980 average catch per capita data. Sport catches for 1977 to 1998 based on statewide postal harvest surveys. Sport harvest for 1999 and 2000 is based on preliminary creel survey data, pending compilation of statewide postal harvest surveys.

Table 10. Actual and projected releases of chinook salmon by brood year.

[illegible]

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[illegible]

Table 11. Chinook smolt capacity of Southeast Alaska hatcheries, 1996–2001.

Facility	Age at Release	Thousands of Smolts						
		1996	1997	1998	1999	2000	2001	2002
Burro Creek	1	40	50	100	100	100	100	0
Crystal Lake	1	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Deer Mountain	1	100	100	100	100	100	100	100
Macaulay	1	590	590	600	600	600	600	600
Hidden Falls	1	1,100	1,100	1,100	1,100	1,100	1,100	2,100
Jerry Myers	1	10	10	10	10	10	10	10
Klawock River	1				250	250	250	250
Little Port Walter	1	200	200	200	200	200	200	200
Medvejie Creek	0						300	300
Medvejie Creek	1	1,100	1,100	2,000	2,000	2,000	2,000	2,000
Neets Bay	1	325	325	325	325	325	325	325
Port Armstrong	1	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Sheldon Jackson	1	100	100	100	100	100	100	100
Tamgas	0	250	250	250	250	250	250	300
Tamgas	1	500	500	500	500	500	500	500
Whitman Lake	1	775	775	775	775	775	775	775
Total Age 0		250	250	250	250	250	550	600
Total Age 1 & 2		8,140	8,150	9,110	9,360	9,360	9,660	10,560

Table 12. Estimated harvest and escapement of chinook salmon from Southeast Alaska enhancement sites in 2001.

Release Site	Harvest						Rack Return		Total
	Troll	Net		Sport ^a	Term. Sport	Canadian ^b	Cost Recov.		
		Adults	Jacks				Adults	Jacks	
Auke Bay	720	499		887	600	^c			2,706
Big Boulder Creek	4			0					4
Burro Creek	12	16						32	60
Crystal Lake	1,089	274		546	3,600	^a		2,946 340	8,795
Deer Mountain	332			275	250	^b		159 4	1,020
Earl West Cove	728	132		335					1,195
Fish Creek	450	169		998	150	^c			1,767
Gastineau(Macaulay)	129	143		199	750	^c		1,422 1,185	3,828
Hidden Falls	7,428	7,741		453	100	^b	14,075	2,823 355	32,975
Jerry Meyers	19			9					28
Little Port Walter	699	130		81			3	1,291 209	2,413
Long Lake	23						90		113
Medvejie Creek	6,503	0		2,052	100	^b	19,664	3,190 1,209	32,718
Neets Bay ^c	1,660	271		1,196			9,668	0 0	12,795
Pullen Creek	0	55							55
Sheldon Jackson	30	0		0		^b		14 2	46
Tamgas Creek	835	2,405		727		^d	15,965	216 300	20,448
Whitman Lake	4,039	670		3,161		^d	9,960	1,314 1,158	20,302
Totals	24,700	12,505	0	10,919	5,550	0	69,425 0	13,407 4,762	141,268

^a Sport Fish estimate.

^b Operator's estimate for terminal area.

^c Sport Fish Div. estimates 1,500 total terminal sport harvest in Gastineau Channel; apportioned to release sites by operator's estimate.

^d Operator's estimate for terminal area; includes personal use.

Table 13. Estimated harvest and escapement of Alaska hatchery-produced chinook salmon in Southeast Alaska, 1980–2001.

Year	Gear Type			Cost	Brood	Total Return ^b
	Troll	Net	Sport	Recovery	Escapement ^a	
1980	5,877	363	N/A	0	N/A	8,571
1981	1,949	59	N/A	0	N/A	3,985
1982	943	212	N/A	0	N/A	2,105
1983	1,857	113	872	0	1,451	4,293
1984	3,626	563	1,904	0	6,029	12,122
1985	8,100	2,400	3,372	2,011	9,819	25,702
1986	9,900	2,700	5,010	1,900	10,063	29,573
1987	16,600	2,300	5,108	2,466	15,426	41,900
1988	19,716	5,154	5,545	8,670	13,732	52,817
1989	18,804	8,831	6,351	17,748	13,071	64,805
1990	30,040	12,341	16,612	20,824	14,696	94,513
1991	38,336	14,488	18,818	25,854	14,425	111,921
1992	25,687	9,432	9,983	20,523	13,004	78,629
1993	17,805	13,999	9,279	22,929	14,712	78,724
1994	12,069	5,726	6,110	17,401	25,009	66,315
1995	26,187	22,506	9,983	23,690	29,680	112,046
1996	33,344	23,196	10,515	30,003	18,737	115,795
1997	28,111	7,984	9,605	30,487	15,652	91,839
1998	11,504	9,749	8,014	17,413	28,886	75,566
1999	17,203	19,049	11,250	17,249	20,022	84,773
2000	28,944	31,184	24,500	38,106	16,995	139,729
2001	24,700	12,505	16,469	69,425	18,169	141,268

^a Includes jacks.

^b Totals do not include chinook caught in Canadian fisheries.

Table 14. Percent distribution of troll catch of hatchery chinook by PSMFC area, 1980–2001.^a

Facility/Stock/Fishery		PMFC Area									Catch	%
		LYN	NOUT	COUT	CNTR	STEP	SNTR	CIN	SOUT	SIN		
Tahini River												
	winter	0%	0%	0%	30%	0%	16%	0%	0%	0%	48	46%
	summer	0%	0%	0%	27%	0%	11%	13%	0%	4%	56	54%
Big Boulder Cr.												
	winter	0%	0%	0%	16%	0%	11%	0%	0%	0%	5	26%
	summer	0%	0%	21%	47%	0%	5%	0%	0%	0%	14	74%
Lutak Inlet												
Tahini R.	winter	0%	0%	0%	69%	0%	0%	0%	0%	0%	27	69%
	summer	0%	8%	0%	21%	0%	3%	0%	0%	0%	12	31%
Jerry Myers												
Tahini R.	winter	0%	0%	23%	10%	0%	1%	0%	0%	0%	43	34%
	summer	9%	0%	9%	48%	0%	1%	0%	0%	0%	85	66%
Burro Creek												
Tahini R.	winter	0%	0%	13%	75%	0%	0%	0%	0%	0%	14	88%
	summer	0%	0%	0%	0%	0%	13%	0%	0%	0%	2	13%
Gastineau												
Andrew Cr.	winter	0%	0%	2%	1%	0%	8%	0%	0%	0%	329	12%
	summer	0%	4%	14%	57%	0%	14%	0%	0%	0%	2,529	88%
King Salmon R.												
	winter	0%	0%	0%	0%	7%	3%	0%	0%	0%	28	
	summer	8%	0%	0%	82%	0%	0%	0%	0%	0%	240	
Snettisham												
King Salmon R.	winter	0%	0%	0%	1%	2%	31%	0%	0%	0%	154	34%
	summer	0%	0%	0%	11%	9%	37%	5%	3%	0%	302	66%
Andrew Cr.												
	winter	0%	0%	3%	9%	1%	22%	0%	0%	0%	2,516	35%
	summer	0%	1%	5%	21%	1%	35%	0%	1%	1%	4,719	65%
Hidden Falls												
Tahini R.	winter	0%	0%	12%	33%	0%	8%	0%	0%	0%	261	53%
	summer	0%	1%	4%	31%	0%	11%	0%	0%	0%	231	47%
Andrew Cr.												
	winter	0%	0%	2%	1%	0%	3%	0%	0%	0%	3,007	6%
	summer	0%	2%	7%	76%	0%	9%	0%	0%	0%	48,881	94%
Sheldon Jackson												
Andrew Cr.	winter	0%	0%	16%	1%	0%	0%	0%	0%	0%	589	17%
	summer	0%	0%	78%	3%	0%	2%	0%	0%	0%	2,872	83%
Medvejie Creek												
Andrew Cr.	winter	0%	0%	6%	1%	0%	1%	0%	0%	0%	4,375	8%
	summer	0%	1%	86%	1%	0%	3%	0%	1%	0%	53,358	92%
Chickamin												
	winter	0%	0%	4%	0%	0%	1%	0%	0%	0%	635	5%
	summer	0%	3%	86%	1%	0%	3%	1%	1%	0%	12,094	95%
Farragut River												
	winter	0%	0%	4%	2%	2%	24%	0%	0%	0%	187	31%
	summer	0%	1%	2%	8%	1%	57%	1%	1%	0%	412	69%
Crystal Lake												
Andrew Cr.	winter	0%	0%	2%	2%	1%	22%	2%	0%	0%	21,953	29%
	summer	0%	1%	5%	7%	1%	36%	16%	2%	2%	52,973	71%
Little Port Walter												
Unuk R.	winter	0%	0%	3%	3%	0%	17%	0%	0%	0%	4,708	23%
	summer	0%	2%	8%	13%	0%	50%	1%	2%	0%	15,862	77%
Chickamin R.												
	winter	0%	0%	5%	1%	0%	18%	0%	0%	0%	3,480	25%
	summer	0%	2%	9%	12%	0%	50%	0%	1%	0%	10,176	75%
King Salmon R												
	winter	0%	0%	5%	0%	0%	24%	2%	0%	0%	406	33%
	summer	0%	1%	7%	16%	0%	43%	0%	0%	0%	832	67%
Port Armstrong												
Unuk R.	winter	0%	0%	5%	7%	0%	11%	0%	0%	0%	818	24%
	summer	0%	0%	9%	13%	0%	52%	1%	1%	0%	2,615	76%
Andrew Cr.												
	winter	0%	0%	8%	0%	0%	2%	0%	0%	0%	95	10%
	summer	0%	3%	5%	20%	0%	62%	0%	0%	0%	860	90%
Harding River												
	winter	0%	0%	4%	0%	0%	7%	3%	0%	0%	10	13%
	summer	0%	0%	23%	3%	0%	23%	21%	4%	13%	65	87%

-continued-

Table 14. (page 2 of 2)

Facility/Stock/Fishery		PMFC Area										Catch	%
Burnett Inlet		LYN	NOUT	COUT	CNTR	STEP	SNTR	CIN	SOUT	SIN			
Andrew Ck	winter	0%	0%	2%	8%	0%	17%	0%	0%	0%	221	27%	
	summer	0%	3%	4%	4%	0%	11%	23%	5%	22%	601	73%	
Harding R.	winter	0%	0%	100%	0%	0%	0%	0%	0%	0%	4	100%	
	summer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%	
Bell Island													
Unuk R.	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%	
	summer	0%	0%	38%	13%	0%	25%	0%	0%	25%	8	100%	
Neets Bay													
Unuk R.	winter	0%	0%	3%	3%	0%	8%	2%	0%	4%	5,627	20%	
	summer	0%	4%	6%	7%	0%	12%	12%	9%	31%	22,535	80%	
Chickamin R.	winter	0%	0%	15%	0%	1%	2%	2%	0%	0%	570	19%	
	summer	0%	8%	40%	1%	0%	15%	1%	2%	13%	2,363	81%	
Deer Mountain													
Unuk R.	winter	0%	0%	2%	1%	0%	12%	2%	0%	4%	1,309	21%	
	summer	0%	4%	15%	5%	0%	8%	5%	10%	32%	5,075	79%	
Whitman Lake													
Chickamin R.	winter	0%	0%	10%	1%	0%	5%	1%	1%	5%	6,234	22%	
	summer	0%	4%	14%	3%	0%	8%	3%	6%	40%	21,766	78%	
Unuk R.	winter	0%	0%	2%	1%	0%	5%	0%	0%	2%	2,320	11%	
	summer	0%	4%	6%	4%	0%	8%	3%	12%	53%	19,494	89%	
Tamgas Creek													
Unuk/Chickamin R.	winter	0%	0%	7%	2%	0%	7%	1%	0%	7%	2,888	24%	
	summer	0%	2%	9%	2%	0%	6%	2%	6%	48%	9,268	76%	

^a PSMFC Areas

<u>Name</u>	<u>Abbreviation</u>	<u>Districts</u>
Lynn Canal	LYN	115
Northern Outside	NOUT	116, 157, 181, 183, 185, 189
Central Outside	COUT	113, 154
Central Intermediate	CNTR	112, 114
Stephens Passage	STEP	111
Southern Intermediate	SNTR	105, 109, 110
Central Inside	CIN	106, 107, 108
Southern Outside	SOUT	103, 104, 152
Southern Inside	SIN	101, 102, 150

Table 15. Total return of chinook salmon released from various enhancement sites in Southeast Alaska, by return year.^a

Return Year	Auke Creek ^b	Big Boulder ^c	Burro Creek	Carroll Inlet ^d	Crystal Lake	Deer Mountain	Earl West ^e	Fish Creek ^b	Gastineau	Hidden Falls	Jerry Myers
1980					5,258	160					
1981					2,531	310					
1982					1,284	1,577					
1983					1,633	2,481					
1984					4,186	2,246				18	
1985					8,879	3,144				83	
1986					7,081	2,511				257	
1987	21				16,681	565		3		661	
1988	257			653	10,076	539	384	52		573	
1989	580			5,003	11,213	1,541	2,807	441	5	571	
1990	865			22,045	18,693	1,370	11,226	536	11	1,566	60
1991	1,959			28,810	15,657	1,324	15,595	1,648	113	2,179	91
1992	1,001			9,868	12,676	1,002	9,570	690	87	2,613	32
1993	1,545			3,008	8,361	1,171	9,264	1,083	707	2,784	55
1994	636		1	1,409	6,143	1,113	8,523	1,077	2,471	10,185	250
1995	515	3	7	2,775	6,558	841	4,516	1,136	3,771	32,295	214
1996	1,035	35	34	1,999	10,310	483	4,678	885	3,075	40,813	29
1997	361	9	46	2,758	7,474	614	1,866	809	3,985	25,440	
1998	246	22	76	1,906	5,394	761	3,183	337	2,687	11,913	6
1999	3,005	6	40	275	8,583	1,322	4,771	1,198	1,239	23,629	
2000	2,585	4	73		5,784	1,216	10,547	1,353	849	37,197	
2001	2,706	4	60		8,795	1,020	1,195	1,767	3,828	32,975	28

Return Year	L. Port Walter	Lynn Canal ^f	Medvejie Creek	Montana Creek ^g	Neets Bay ^h	Port Armstrong ⁱ	Sheep Creek ^j	Sheldon Jackson	Snettisham	Tamgas Creek	Whitman Lake
1980	1,877										
1981	896										
1982	1,441								14		2,672
1983	1,577								34		
1984	2,670				400				265		3,356
1985	3,363		686		2,796				431		3,815
1986	6,338		86		9,872				1,016	529	770
1987	9,517		426		7,126		2		3,373	1,829	2,987
1988	7,592		775	2	17,320		136		1,099	1,821	4,220
1989	5,144		680	12	26,148	2,069	407	176	507	2,562	8,730
1990	7,271	11	3,829	95	15,217	1,163	671	351	1,407	2,571	39,169
1991	7,587	74	7,589	156	9,470	846	1,309	490	1,130	8,617	3,800
1992	3,026	189	17,382	95	8,908	1,355	858	467	1,614	7,233	714
1993	2,995	267	28,980	17	11,326	1,515	2,040	892	2,493	3,008	428
1994	3,873	295	21,462	14	3,254	1,241	1,180	1,280	1,969	2,163	399
1995	5,190	200	45,921	14	2,279	1,270	406	1,194	293	1,940	1,019
1996	4,270	201	37,868		715	2,526	4	1,316		1,834	1,039
1997	3,953	138	37,077		765	1,086	7	638		3,926	1,508
1998	2,121	60	21,031		874	17	5	273		4,638	19,949
1999	3,195	0	20,109		2,456		170	352		6,268	8,122
2000	2,861		29,020		4,536			392		16,335	15,905
2001	2,413		32,718		12,795			46		20,448	20,302

^a Includes all ages and Canadian recoveries.

^b Reared at Snettisham (BY 84–92) and Gastineau (BY 93–97).

^c Releases of fed fry incubated and reared at Gastineau Hatchery.

^d Reared at Whitman Lake Hatchery.

^e Reared at Crystal Lake Hatchery.

^f smolts reared at Hidden Falls and Gastineau hatcheries, released in Lynn Canal.

^g Reared at Snettisham.

^h Includes smolts reared at Crystal Lake and released at Neets Bay.

ⁱ includes smolts reared at Snettisham and released at Port Armstrong.

^j brood years 1984–1988 reared at Snettisham; brood year 1993 reared at Gastineau.

Table 16. Common property exploitation rate (%) of chinook salmon returning to enhancement sites with reasonably complete counts in terminal areas and at the rack, by return year.^{a, b}

Return Year	Crystal Lake	Deer Mountain	Hidden Falls	L. Port Walter	Medvejie Creek	Neets Bay	Port Armstrong	Sheldon Jackson	Tamgas Creek	Whitman Lake
1980	86.4			97.0						
1981	66.3	79.2		67.5						
1982	40.6	62.2		66.0						
1983	28.4	51.0		46.5						
1984	51.6	47.7		39.2						39.5
1985	58.2	51.1	79.1	60.1		47.9				34.7
1986	63.6	40.8	95.7	44.1		61.1				25.0
1987	63.2	59.7	81.0	44.4		44.9			94.6	38.0
1988	43.4	34.7	52.5	36.2	26.1	42.6			51.7	52.2
1989	42.0	34.9	38.6	37.5	43.0	32.8			54.2	42.2
1990	51.4	47.5	59.0	63.9	44.0	23.4	54.2	25.5	48.8	66.2
1991	88.1	38.1	63.2	70.5	25.8	46.2	47.9	23.3	39.5	54.5
1992	85.1	19.9	46.9	50.9	38.0	35.0	53.3	58.0	38.4	30.5
1993	92.0	57.6	58.0	44.1	34.8	28.7	26.4	43.5	50.9	41.4
1994	20.1	49.3	40.0	49.2	41.4	32.0	64.5	43.2	39.9	41.1
1995	80.9	61.5	63.1	59.5	50.5	51.3	35.5	73.2	30.4	41.4
1996	85.1	31.1	80.4	62.1	26.0	82.5	73.1	88.6	11.0	39.6
1997	75.0	21.6	61.5	69.5	35.5	28.8	98.3	53.6	18.5	47.6
1998	63.5	53.6	65.7	69.2	28.7	78.1	100.0	42.9	12.2	47.9
1999	56.8	52.3	74.5	55.9	44.3	43.6		80.1	23.0	53.9
2000	76.1	64.1	67.9	53.7	26.3	46.6		96.4	35.1	95.0
2001 ^c	65.2	84.4	48.2	41.3	27.5	24.4		68.2	19.7	41.1

^a Excludes 0-ocean and 1-ocean fish in cost recovery and escapement, and Canadian recoveries.

^b Includes only sites with good accountability. For other sites, return data are not discrete to that site, or there is no weir or other means to count the total return.

^c Preliminary data.

Table 17. Chinook salmon egg takes in southeast Alaska in 2001 (numbers of eggs in thousands).

Facility	Stock	Females		Disposition of Eggs		
		Spawned	Green Eggs	Facility	Total Adjusted # Green Eggs	Total # of Eyed Eggs
Burro Creek	Tahini R.	16	104.9	Macaulay	100.9	98.9
				Jerry Myers		4.0
Crystal Lake	Andrew Cr.	397	2,000.0	Crystal Lake	1,700.0	1,450.0
Macaulay	Andrew Cr.	0	0.0	Macaulay		312.0
Deer Mountain	Unuk	35	202.9	Deer Mountain	179.7	117.2
Hidden Falls	Andrew Cr.	331	1,847.0	Hidden Falls	1,400.0	1,358.0
Little Port Walter	Unuk R.	53	291.5	Little Port Walter	291.5	102.0
	Chickamin R.	156	936.0	Little Port Walter	936.0	698.6
Medvejie	Andrew Cr.	610	3,141.8	Medvejie	2,845.0	2,445.8
Sheldon Jackson	Andrew Cr.	7	39.0	Sheldon Jackson	39.0	31.7
Tamgas Creek	Unuk/Chickamin	141	947.0	Tamgas	850.0	800.0
Whit.Lk/Carroll Inlet	Chickamin R.	370	1,960.0	Whitman Lake	1,960.0	1,785.0
				Crystal Lake		450.0
Port Armstrong	Unuk		0.0	Port Armstrong		125.0
Totals	Hatchery Return		11,470.1		10,302.1	9,778.2

Table 18. Rearing strategies and release sites of 2001 brood chinook salmon eggs in enhancement programs (numbers in thousands).

Rearing Facility	Stock	Eyed Eggs	Release		Age-0 Smolts	Age-1 Smolts				
			Site	Fry Plants		FW-R ^a	FW-I ^b	SW-R ^c	SW-I ^b	
Crystal Lake	Chickamin R.	450.0	Neets Bay						450.0	
	Andrew Cr.	1,450.0	Crystal Cr			550.0				
			Anita Bay						450.0	
Deer Mountain	Unuk R.	117.2	Ketchikan Cr			100.0				
Macaulay	Tahini R.	98.9	Pullen Cr				90.0			
	Andrew Cr.	312.0	Gastineau					200.0		
			Auke Bay						0.0	
			Fish Cr						112.0	
Hidden Falls	Andrew Cr.	1,358.0	Hidden Falls					1,200.0		
Jerry Myers	Tahini R.	4.0	Taiya Inlet			3.5				
Medvejie	Andrew Cr.	2,445.8	Bear Cove		200.0			2,000.0	^d	
Sheldon Jackson	Andrew Cr.	31.7	Crescent Bay					25.0	^e	
Tamgas Creek	Unuk/Chickamin	800.0	Tamgas Cr		300.0			500.0		
Whitman Lake	Chickamin R.	1,785.0	Herring Cove			750.0				
			Long Lake	250.0	^f					
Total		8,852.6		250.0	500.0	1,403.5	90.0	3,925.0	1,012.0	#

^a Released from fresh water rearing.

^b Smolt transport to release site for imprinting.

^c Released from salt water rearing.

^d Includes Green Lake project.

^e Released from saltwater-filled onshore ponds.

^f Volitional outmigration to Neets Bay as age-1 smolts.

Table 19. Incidence of hatchery strays in ten wild stock streams in Southeast Alaska.

Stream	Years Examined	Total # Years	Number Examined	Hatchery Tags	Hatchery Fish	% From Hatcheries
Chickamin	1985-1993;1995-2001	16	3,850	7	45	1.17%
Chilkat	1983-1987;1989-2001	18	10,041	7	7	0.07%
Farragut	1983-1985;1989;1991-1993	7	617	34	51	8.27%
Harding	1986;1989-1993	6	363	2	4	1.10%
King Salmon	1979;1981-1992;1998-2001	17	651	0	0	0.00%
Stikine	1979-1992;1997-2001	19	28,269	18	119	0.42% ^{a,b}
Taku	1979-1990;1994-2001	20	51,184	0	0	0.00%
Unuk	1985-2001	17	14,434	7	26	0.18%
Keta	1998-2001	4	1,393	2	40	2.87% ^c
Blossom	1998-2001	4	309	1	8	2.59%
Total			111,111	78	300	0.27%

^a Includes Andrew Creek.

^b Two wild Unuk tags in 1998 — not included.

^c One Unuk R wild tag in 1998 — not included.

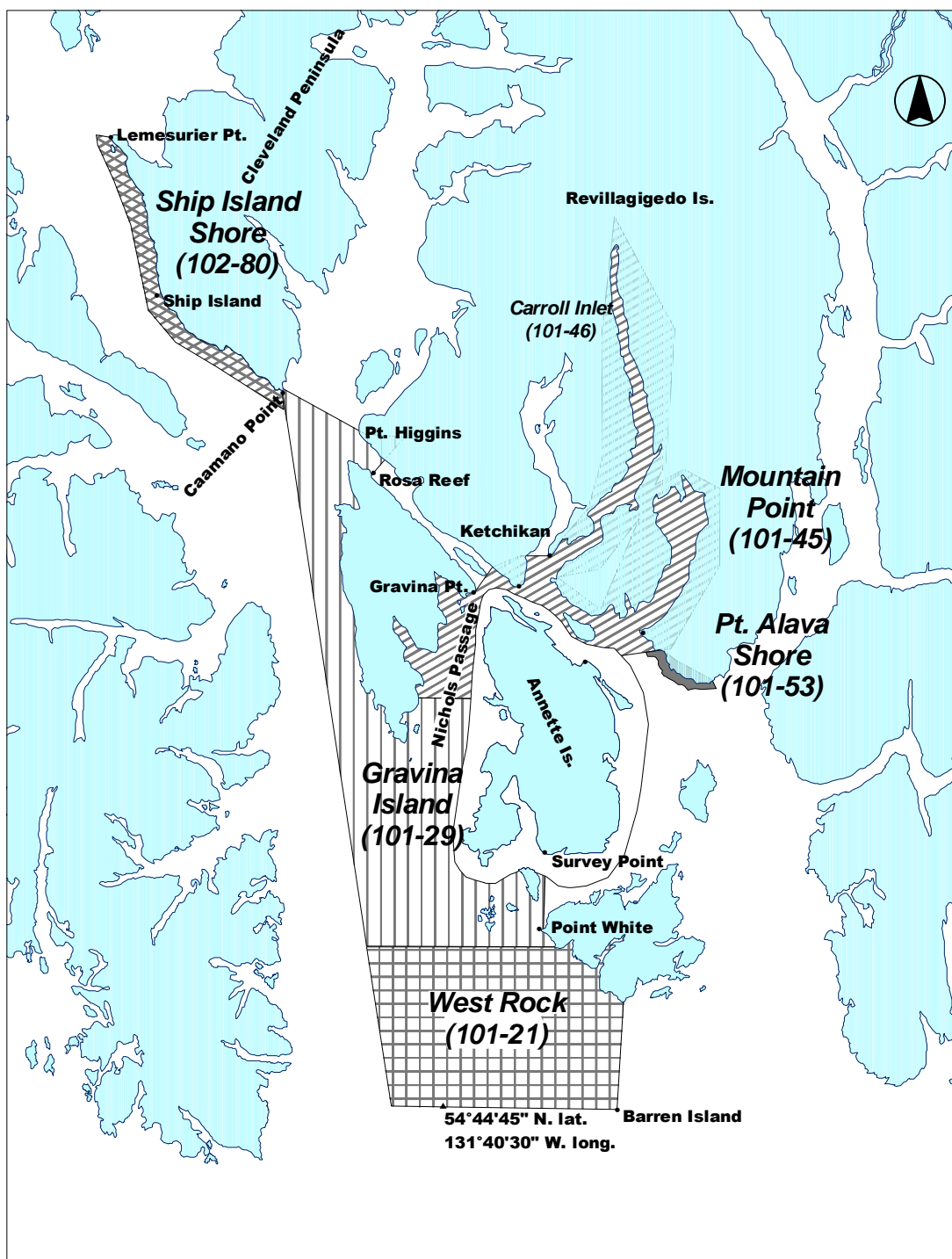


Figure 1. Ketchikan area spring troll fisheries, 2001.

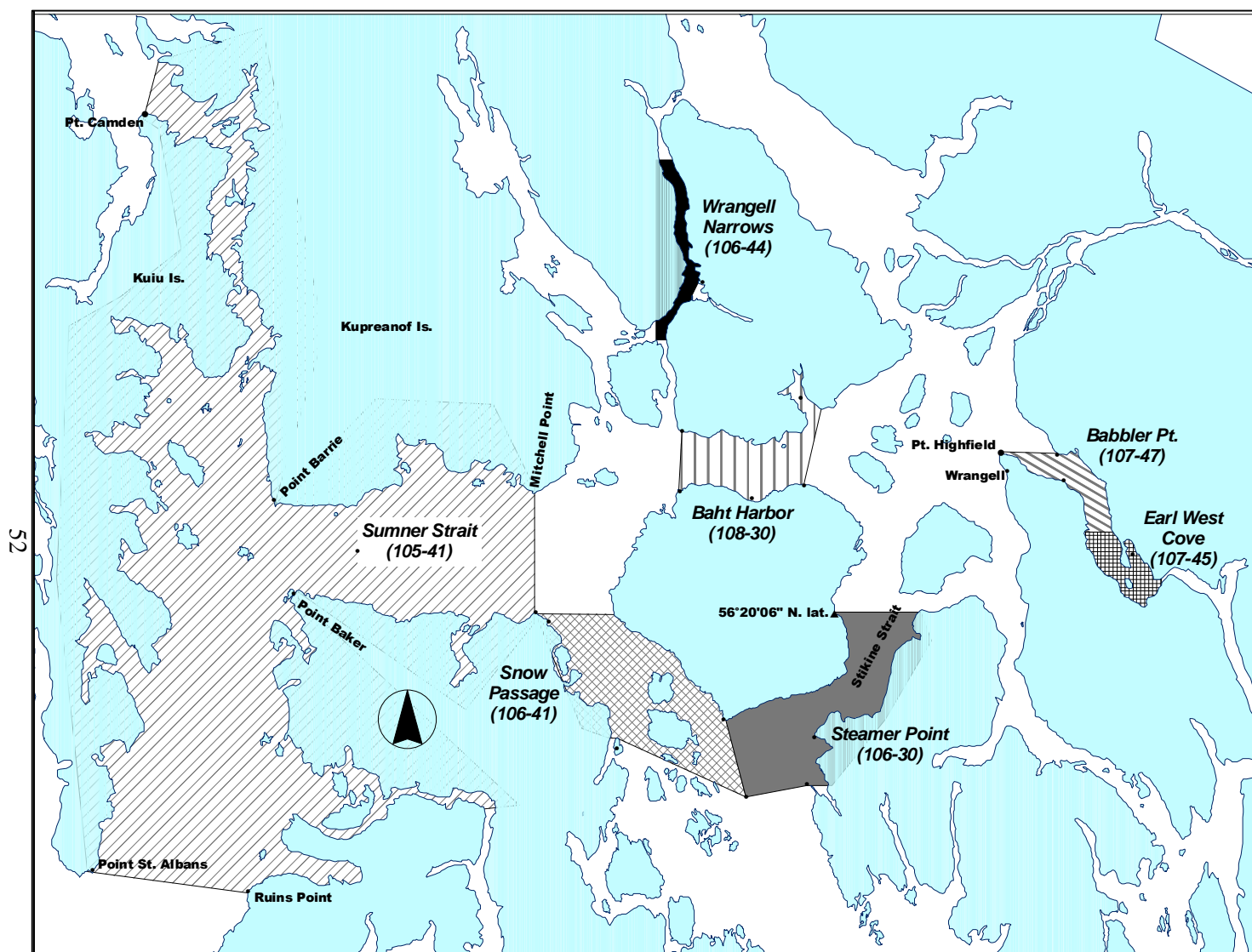


Figure 2. Wrangell area spring troll fisheries, 2001.

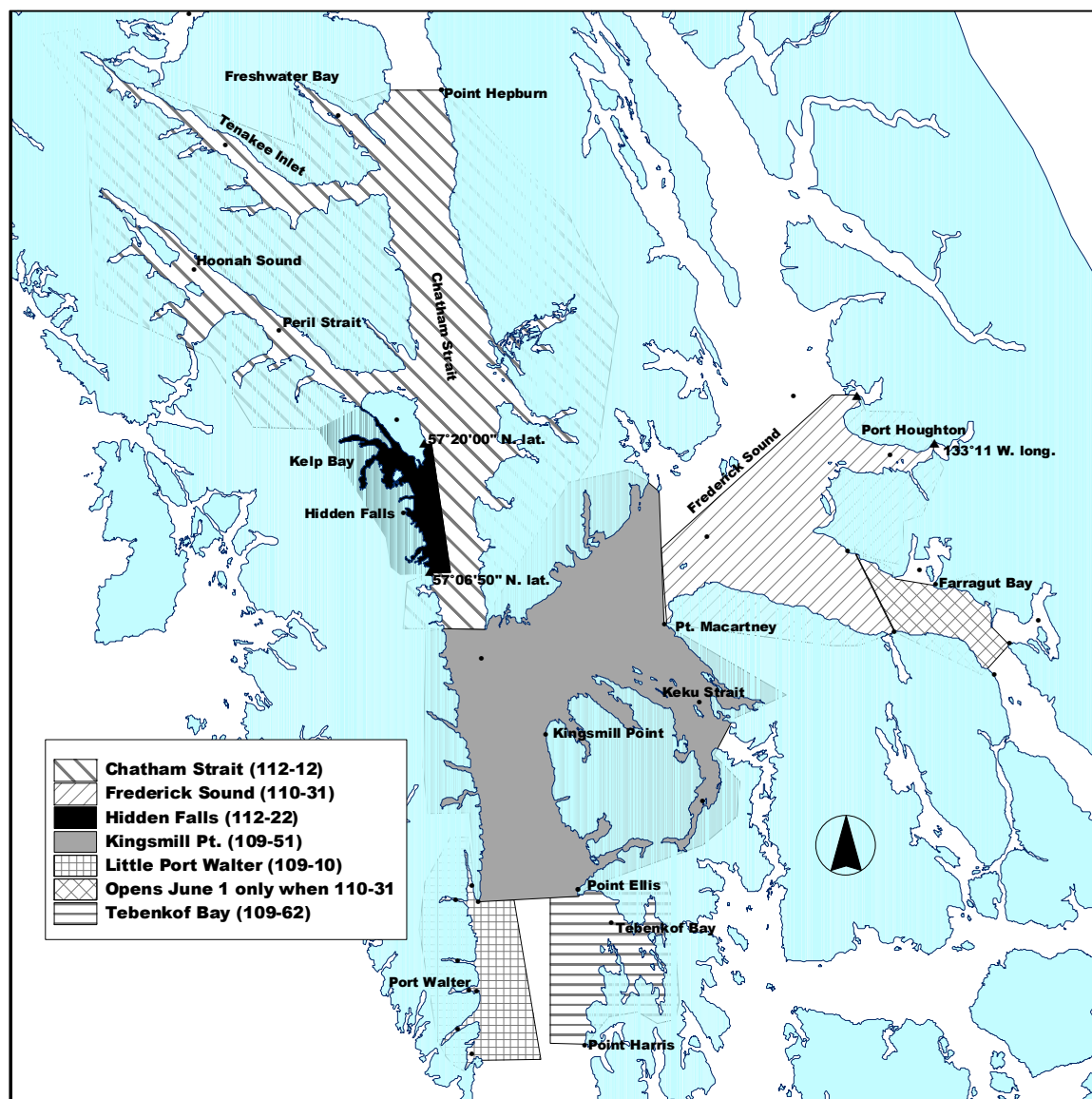


Figure 3. Lower Chatham area spring troll fisheries, 2001.

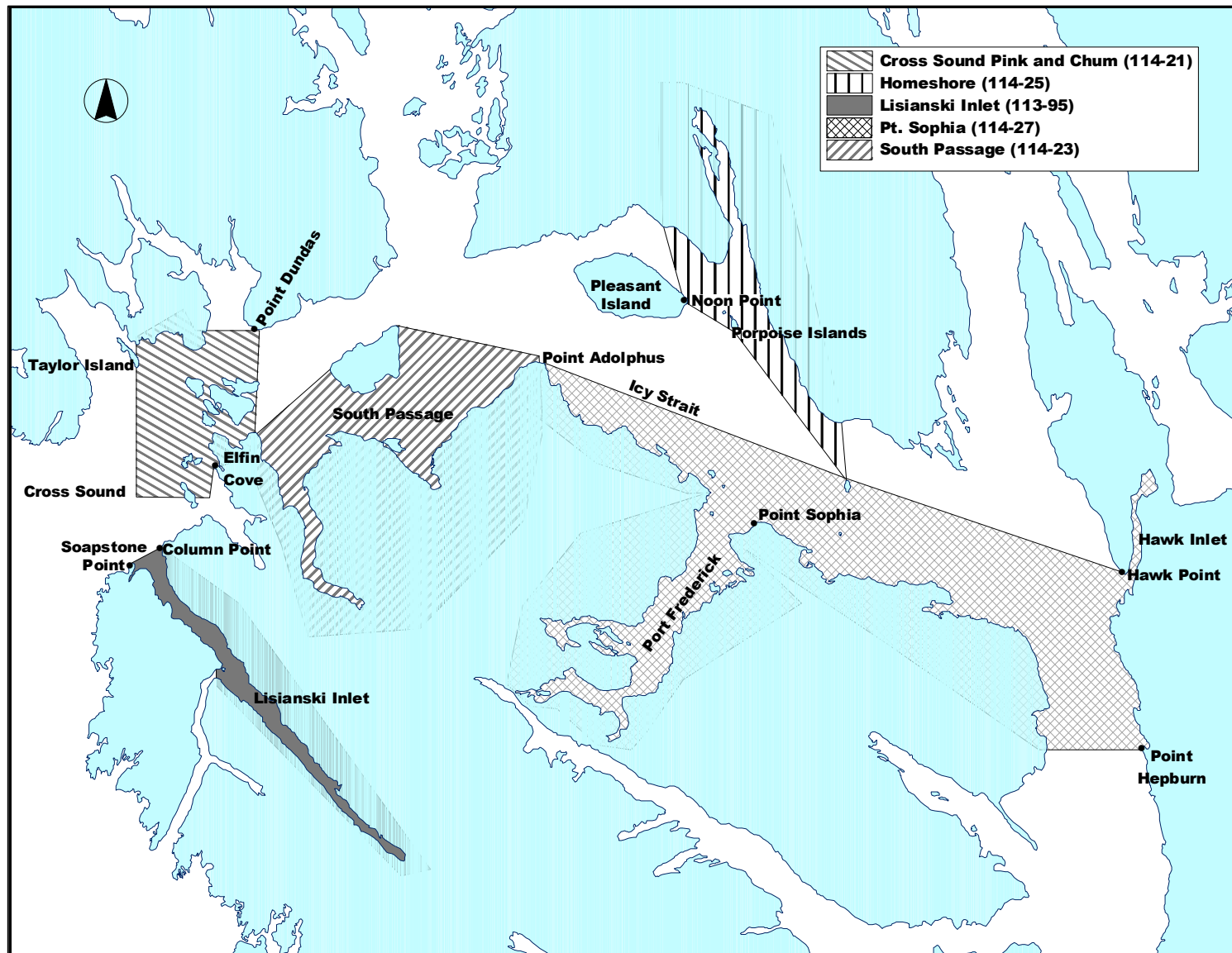


Figure 4. Upper Chatham area spring troll fisheries, 2001.

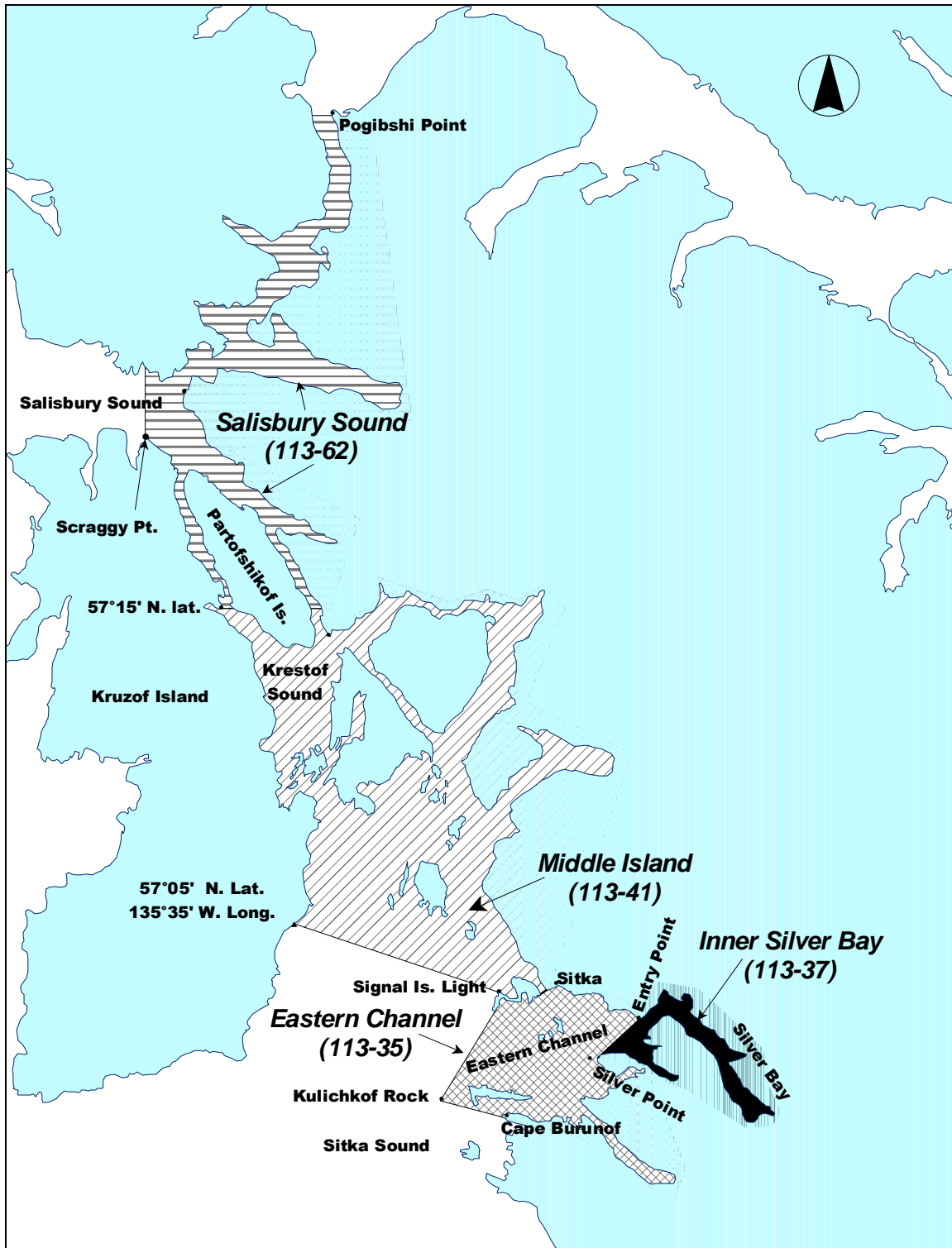


Figure 5. Sitka area spring troll fisheries, 2001.

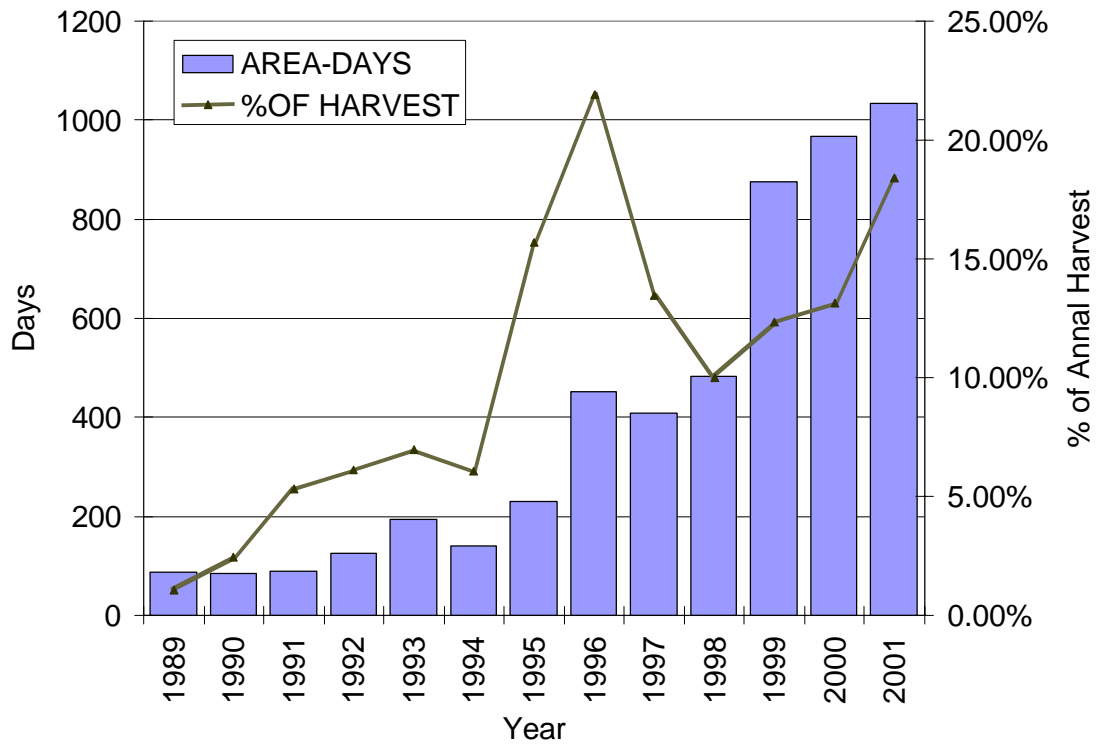


Figure 6. Number of days and percent of annual harvests taken in experimental fisheries, 1989–2001.

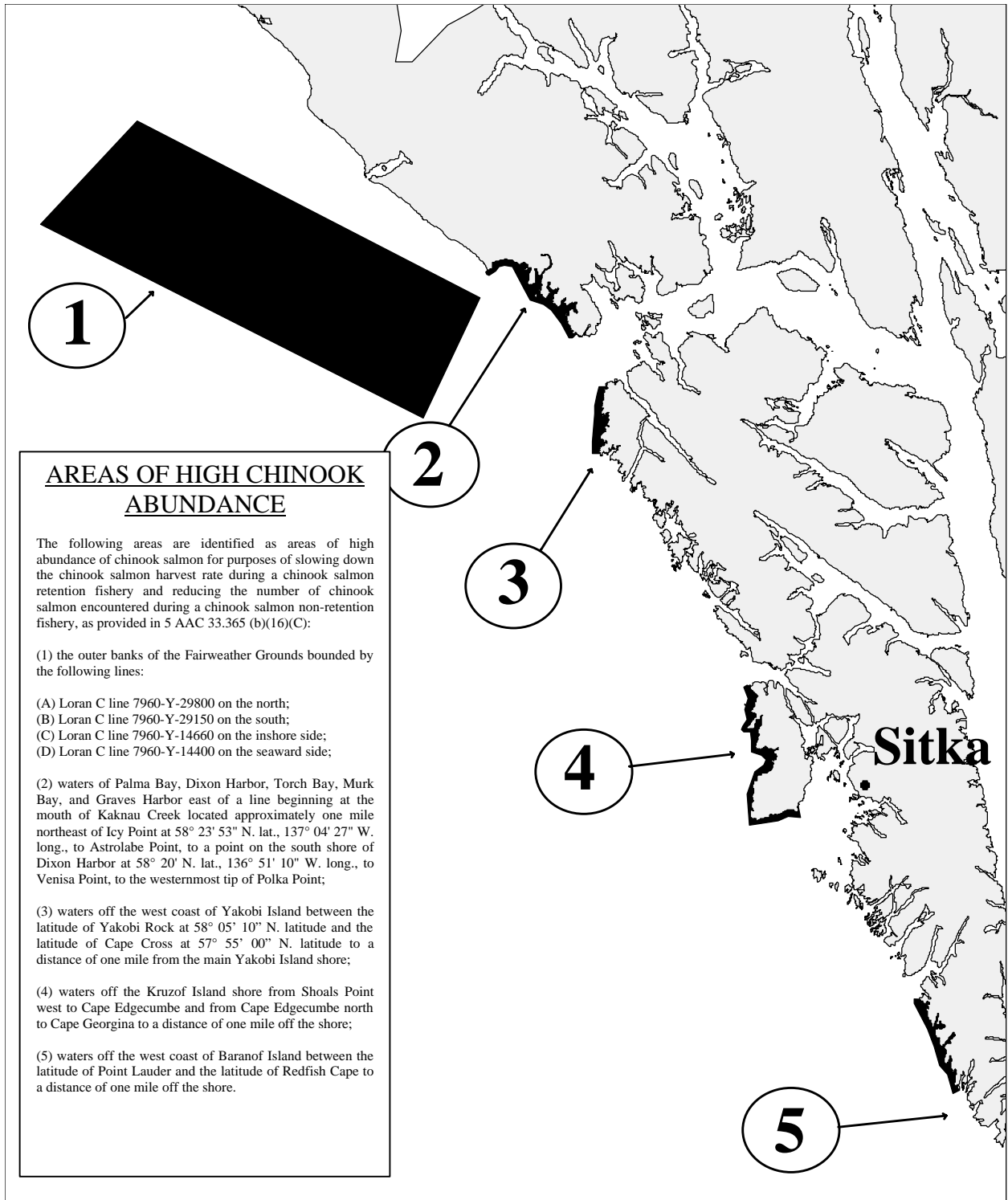


Figure 7. Southeast Alaska areas closed to trolling for all species following the initial chinook salmon opening in the Southeast Alaska summer troll season.

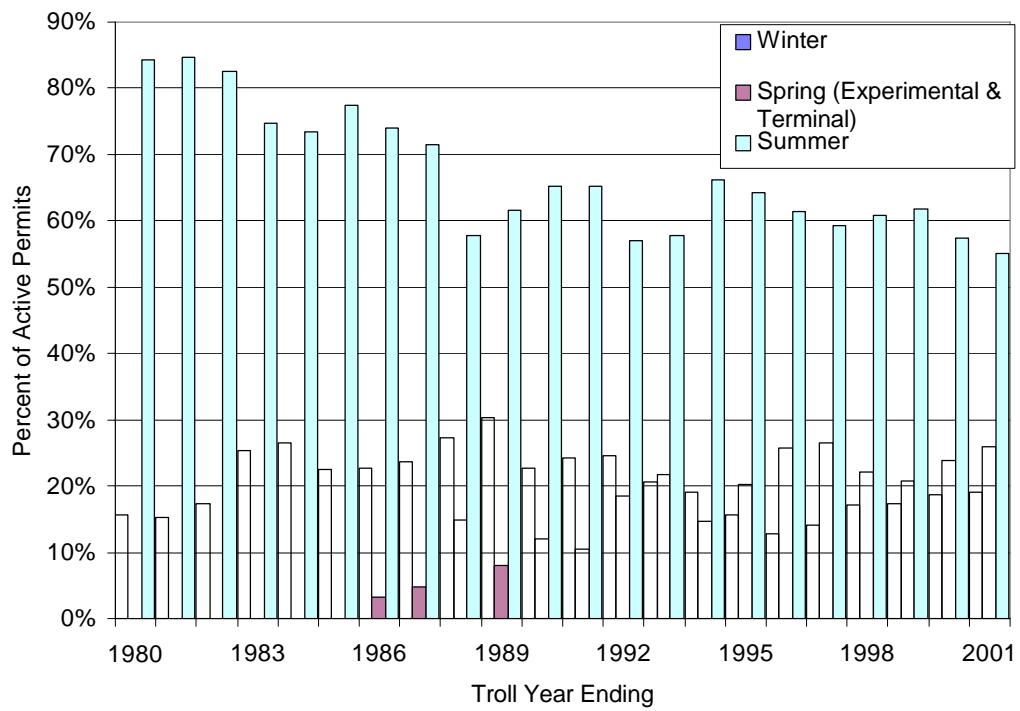


Figure 8. Percent of active troll permits fished by season, 1980–2001.

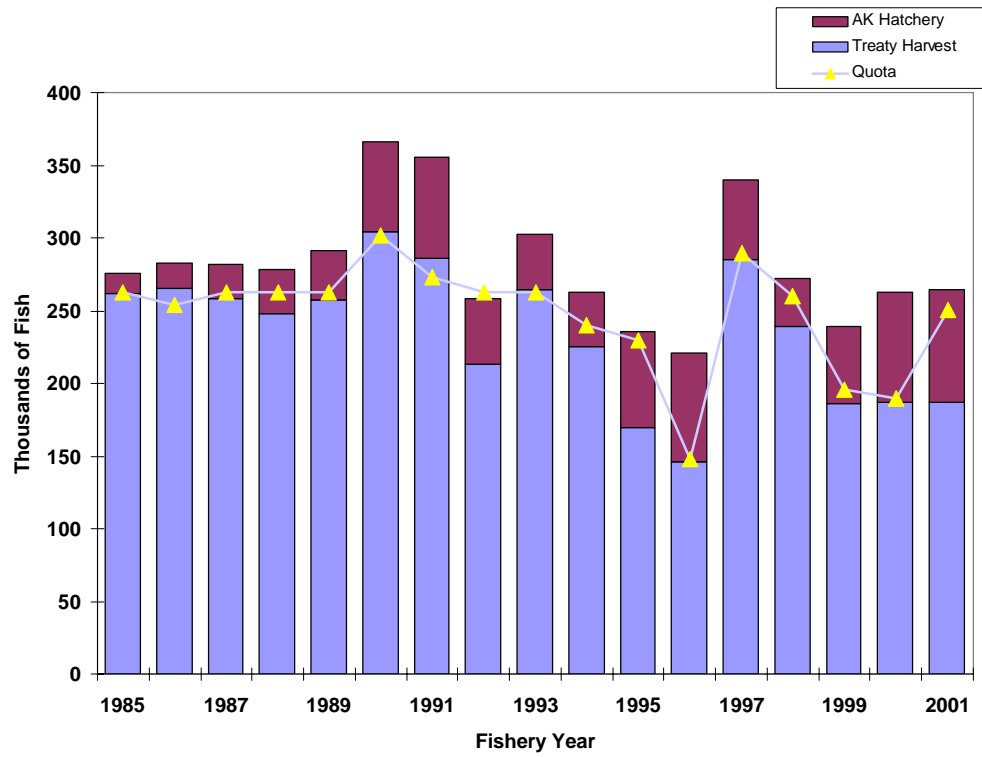


Figure 9. Number of chinook salmon harvested under the Pacific Salmon Treaty quota, 1985–2001.

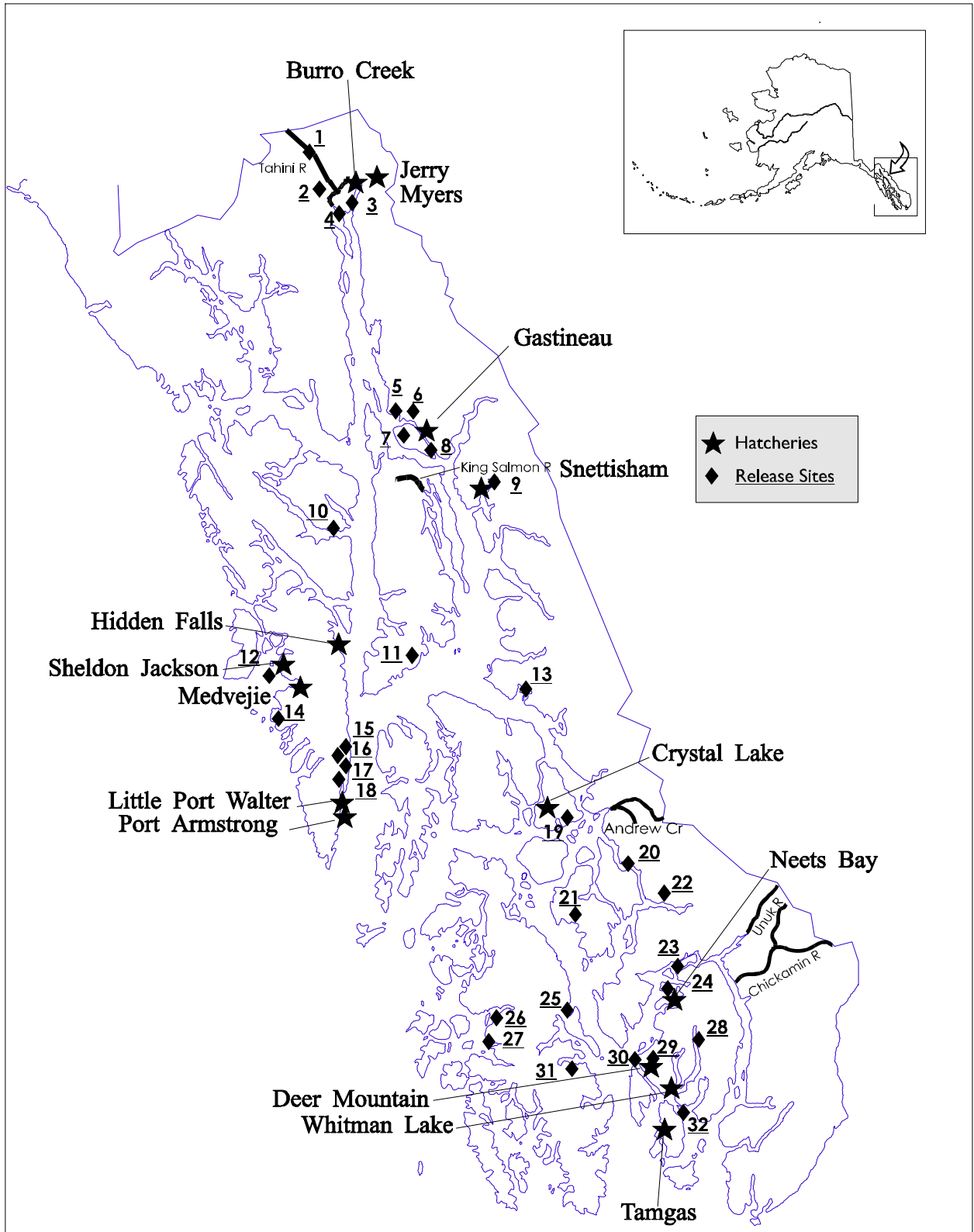


Figure 10. Location of chinook salmon hatcheries, remote release sites, and primary ancestral stock rivers in Southeast Alaska.

Key to remote release sites shown in Figure 10, and stream numbers of chinook salmon release sites and ancestral stocks.

Remote Release Sites

<u>Site No.</u>	<u>Site</u>	<u>District</u>	<u>Sub-district</u>	<u>Stream</u>	<u>Site</u>
5	Auke Bay	111	50	0 ¹	
5	Auke Cr	111	50	10420	
16	Banner Lk	109	10	na ²	
23	Bell Island	101	80	0	
2	Big Boulder Cr	115	32	10250	
26	Big Salt	103	60	0	
32	Bold Island Lk	101	41	10070	
31	Brennan Lk	102	40	10280	
21	Burnett Inlet	106	22	0	
28	Carroll Inlet	101	45	0	
28	Carroll R	101	45	10780	
27	Crab Bay	103	60	0	
20	Earl West Cove	107	40	0	
11	Eliza Lk	109	30	10060	
13	Farragut Lk	110	14	10070	na
13	Farragut R	110	14	10070	
7	Fish Cr	111	50	0	
19	Gengen Lk	108	40	10500	2002
22	Harding R	107	40	10490	
9	Indian Lk	111	33	10300	
10	Indian R	112	42	10080	
15	Larry Lk	109	10	na	
24	Long Lk	101	95	na	
4	Lutak Inlet	115	33	0	
6	Montana Cr	111	50	10520	
19	Ohmer Cr	108	40	10500	
17	Osprey Lk	109	10	na	
14	Redoubt Lk	113	41	10430	
8	Sheep Cr	111	40	10280	
12	Sitka Sound	113	41	0	
1	Tahini R	115	32	10250	2175
3	Taiya Inlet	115	34	0	
30	Thomas Basin	101	47	10250	
25	Thorne Bay	102	70	0	
18	Tranquil Lk	109	10	na	
29	Ward Cove	101	47	0	

Hatchery Release Sites

<u>Site</u>	<u>Hatchery</u>	<u>District</u>	<u>Sub-district</u>	<u>Stream</u>
Deer Mountain	Ketchikan Cr	101	47	10250
Port Armstrong	Jetty Creek	109	10	0
Sheldon Jackson	Crescent Bay	113	41	0
Whitman Lake	Herring Cove	101	45	0
Neets Bay	Neets Bay	101	90	0
Tamgas Creek	Tamgas Cr	101	25	10250
Hidden Falls	Kasnyku Bay	112	11	0
Snettisham	Speel Arm	111	33	0
Gastineau	Gastineau Channel	111	40	0
Crystal Creek	Crystal Cr	106	44	0
Jerry Myers	Pullen Cr	115	34	10310
Burro Creek	Burro Cr	115	34	10230
Medvejie	Bear Cove	113	37	0
Little Port Walter	Little Port Walter	109	10	0

Ancestral Stocks

<u>River</u>	<u>District</u>	<u>Sub-district</u>	<u>Stream</u>	<u>Site</u>
Andrew Creek	108	40	10150	2008
Big Boulder Creek	115	32	10250	
Chickamin River	101	71	10040	2018
Farragut River	110	14	10070	
Harding River	107	40	10490	
King Salmon River	111	17	10100	
Tahini River	115	32	10250	2175
Unuk River	101	75	10300	2030

¹ Stream = 0 indicates return to a terminal harvest site or hatchery.
² Non-anadromous; site is barrierred and adults are unable to access.

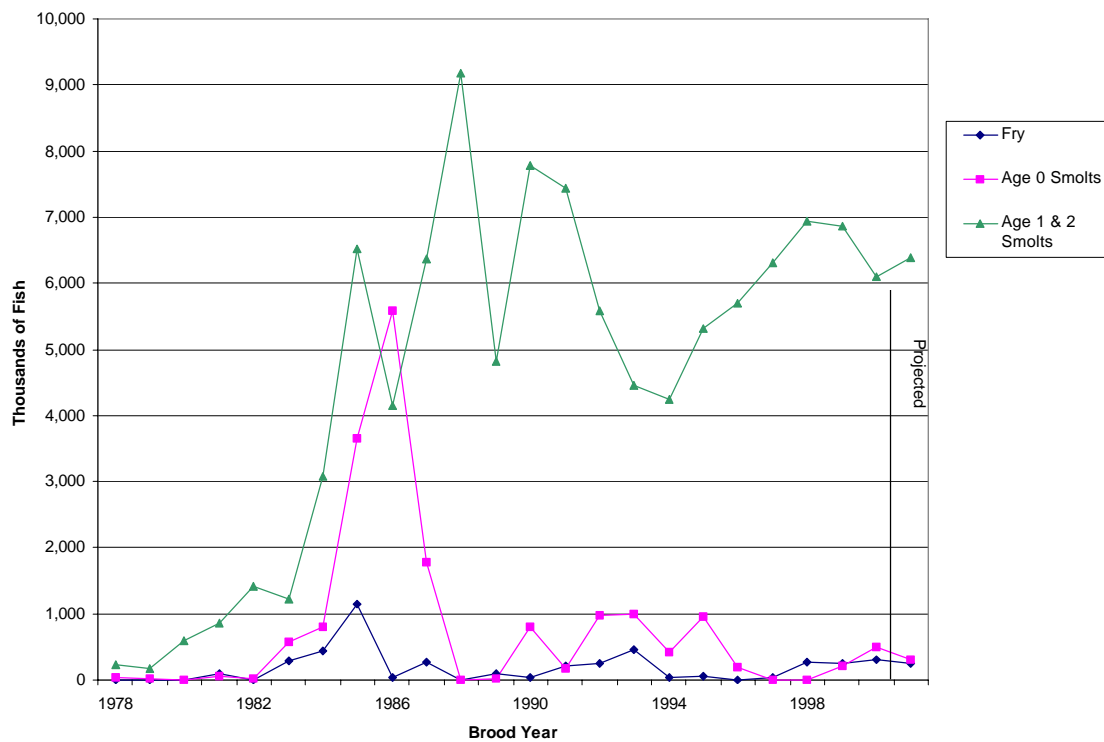


Figure 11. Actual and projected releases of hatchery-produced chinook salmon in Southeast Alaska by brood year, 1978–2001.

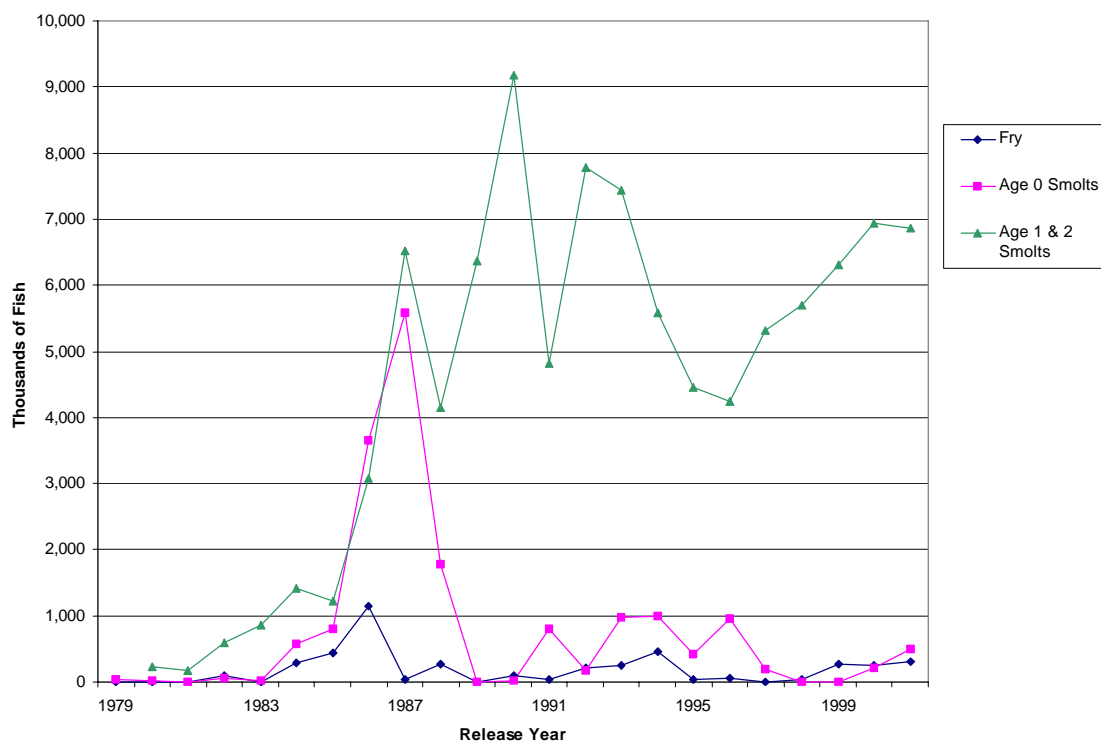


Figure 12. Actual and projected releases of hatchery-produced chinook salmon in Southeast Alaska by calendar year, 1979–2001.

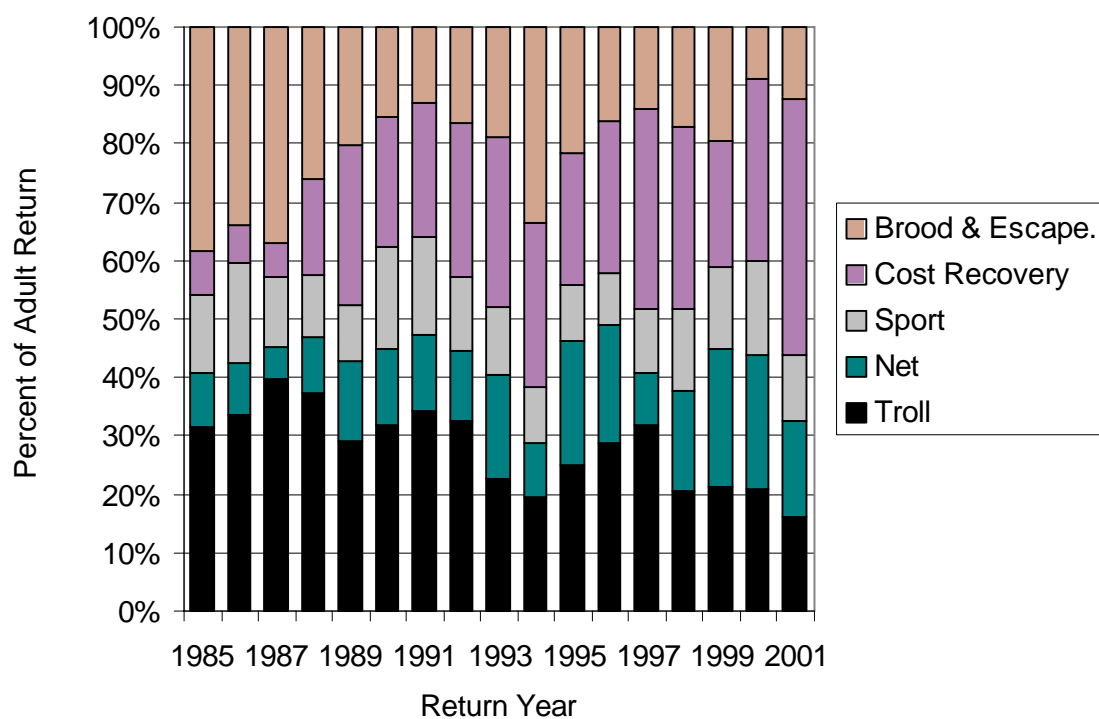


Figure 13. Percentages of Alaska hatchery-produced chinook salmon harvested in common property fisheries and utilized by hatchery operators for cost recovery or broodstock and escapement, 1985–2001.

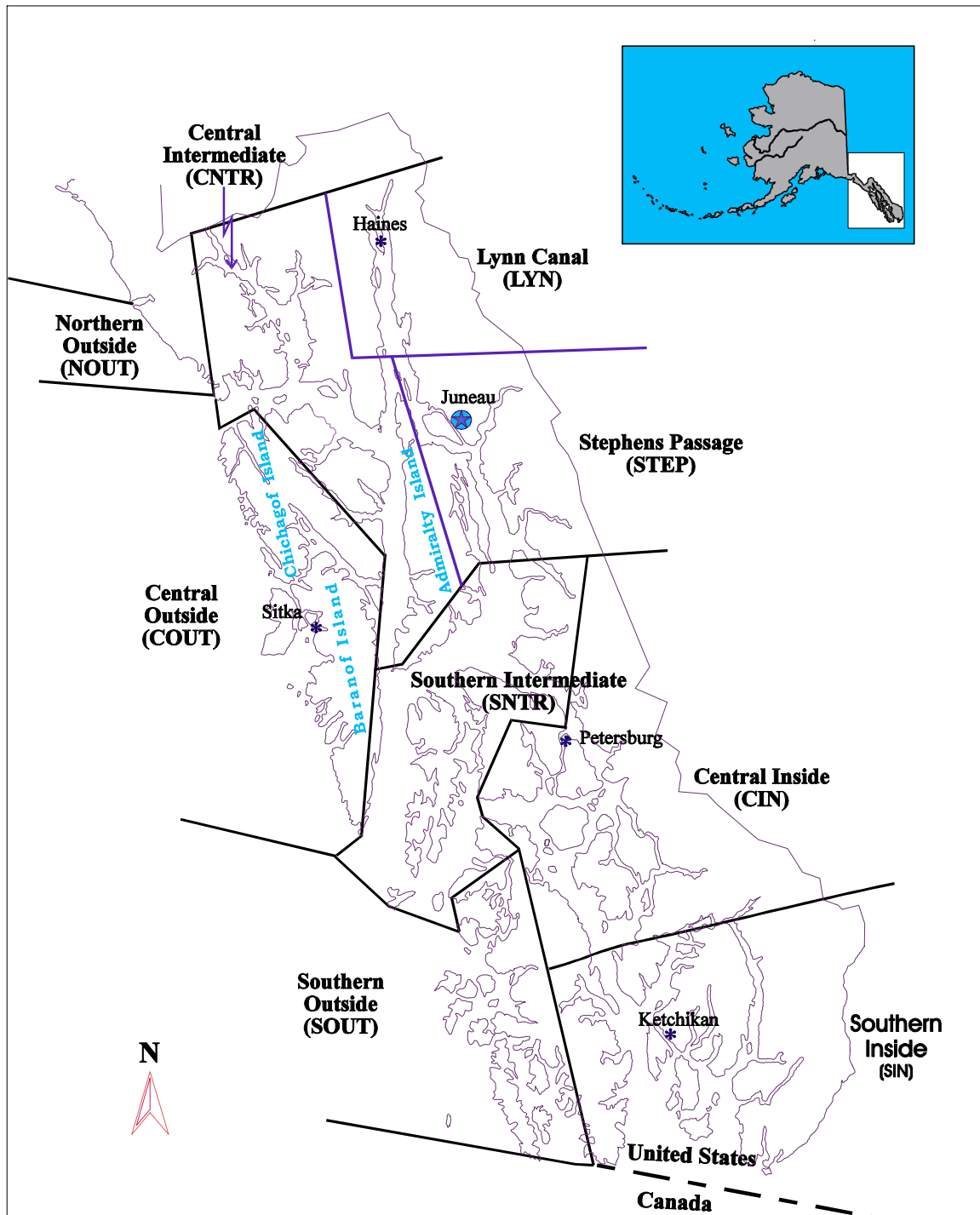


Figure 14. Pacific States Marine Fisheries Commission areas in Southeast Alaska.

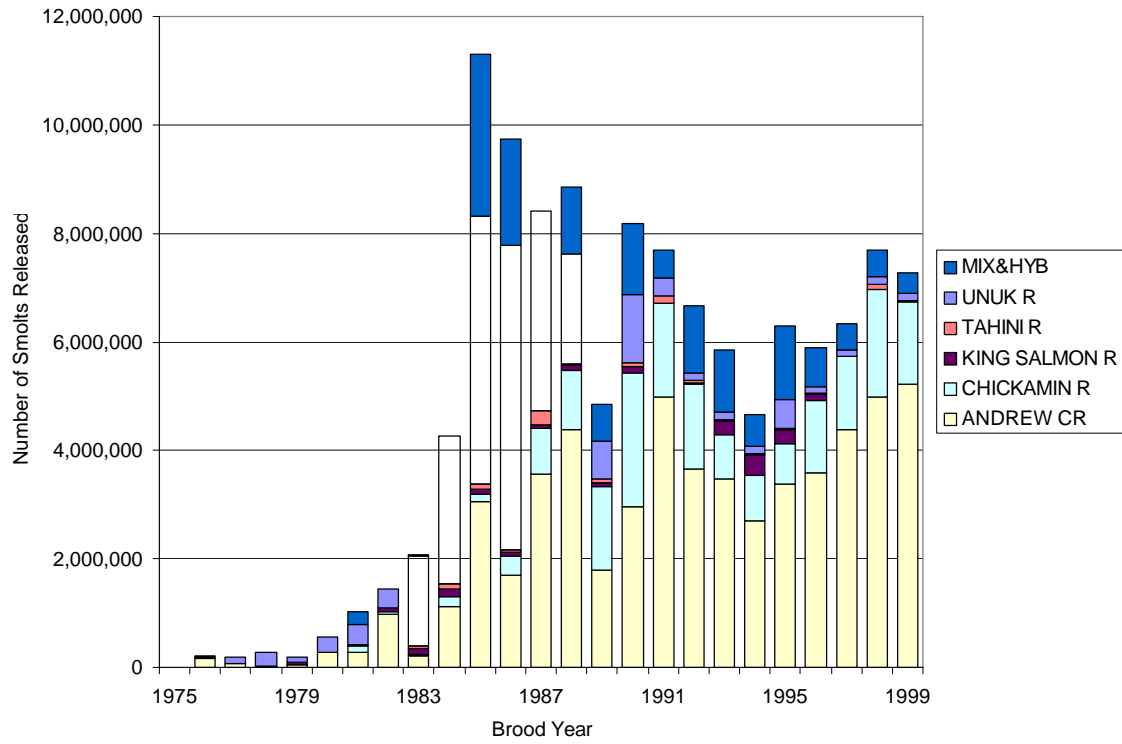


Figure 15. Number of chinook salmon released by Southeast Alaska hatcheries, by ancestral stock, brood years 1976–2001.

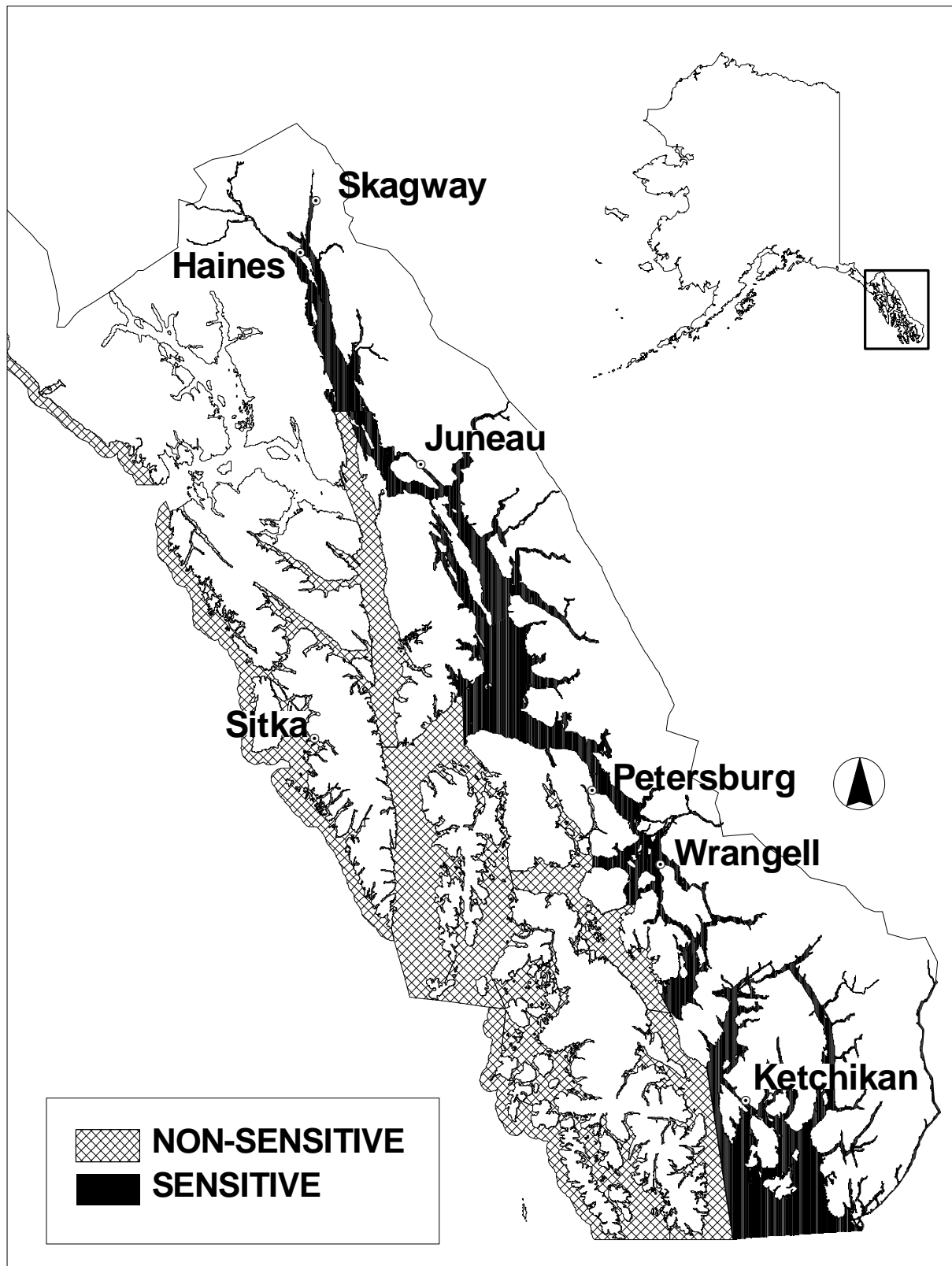


Figure 16. Chinook salmon sensitive and non-sensitive areas in Southeast Alaska.

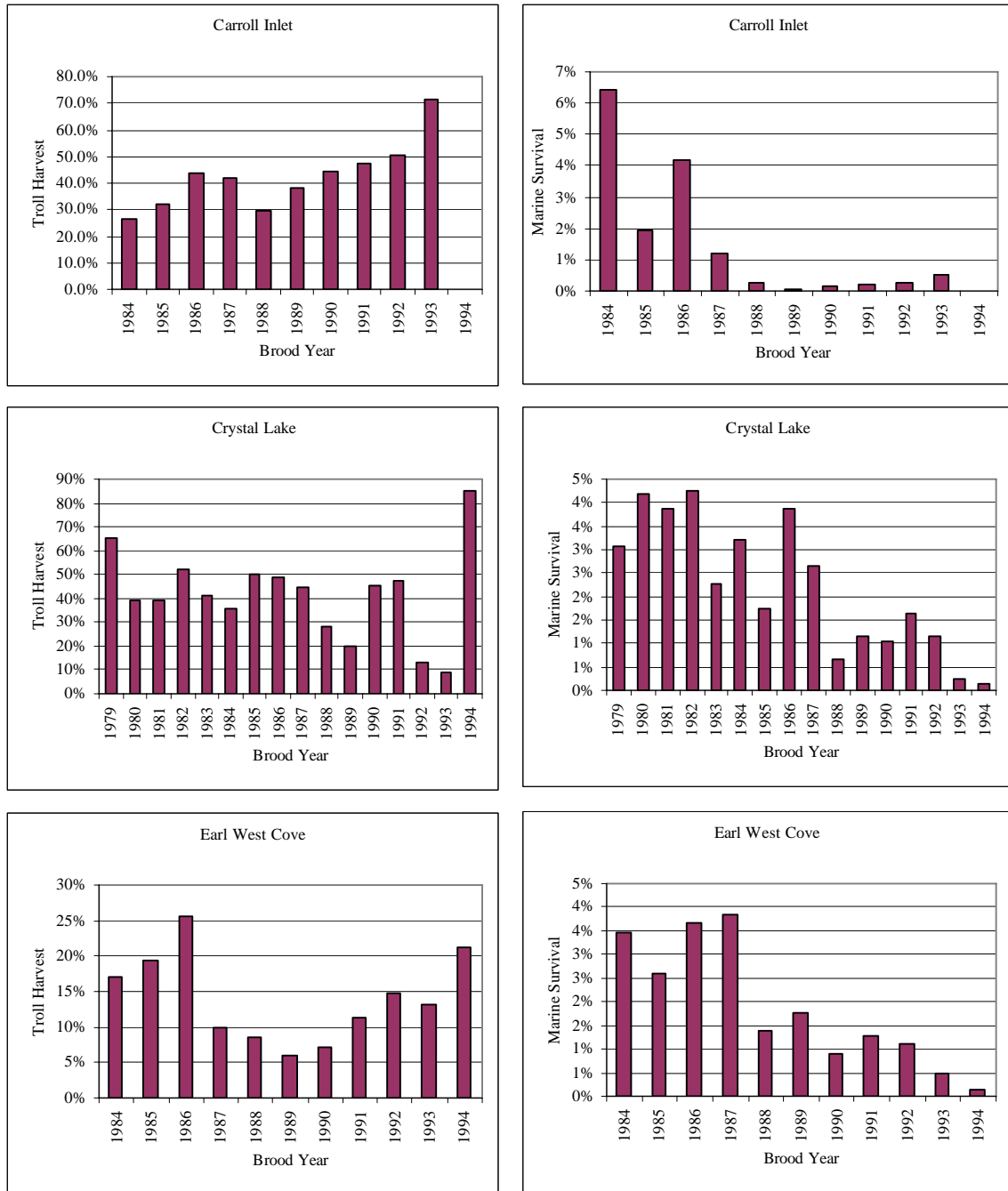


Figure 17. Troll harvest rate and marine survival of chinook salmon released from Southeast Alaska enhancement sites.

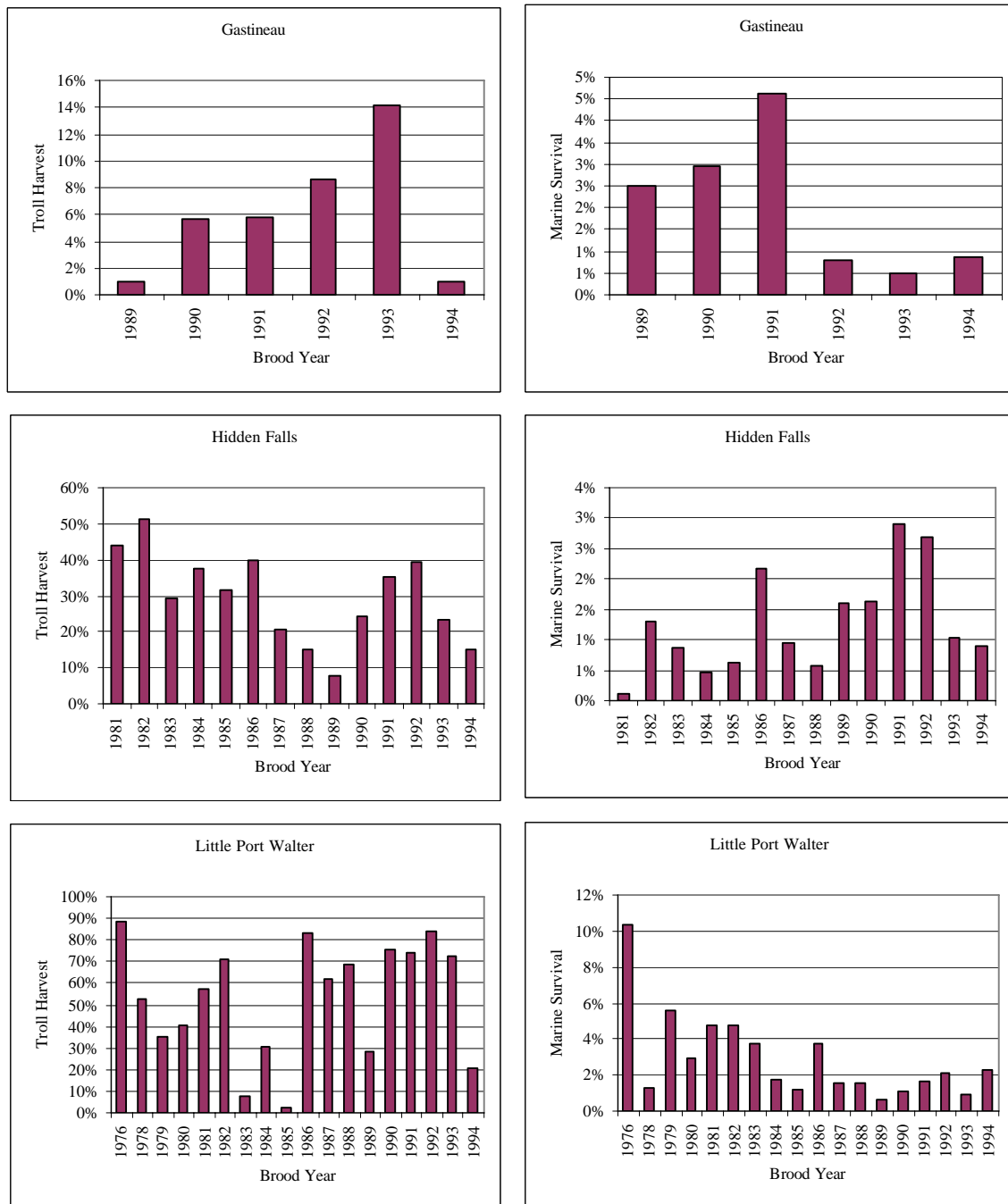


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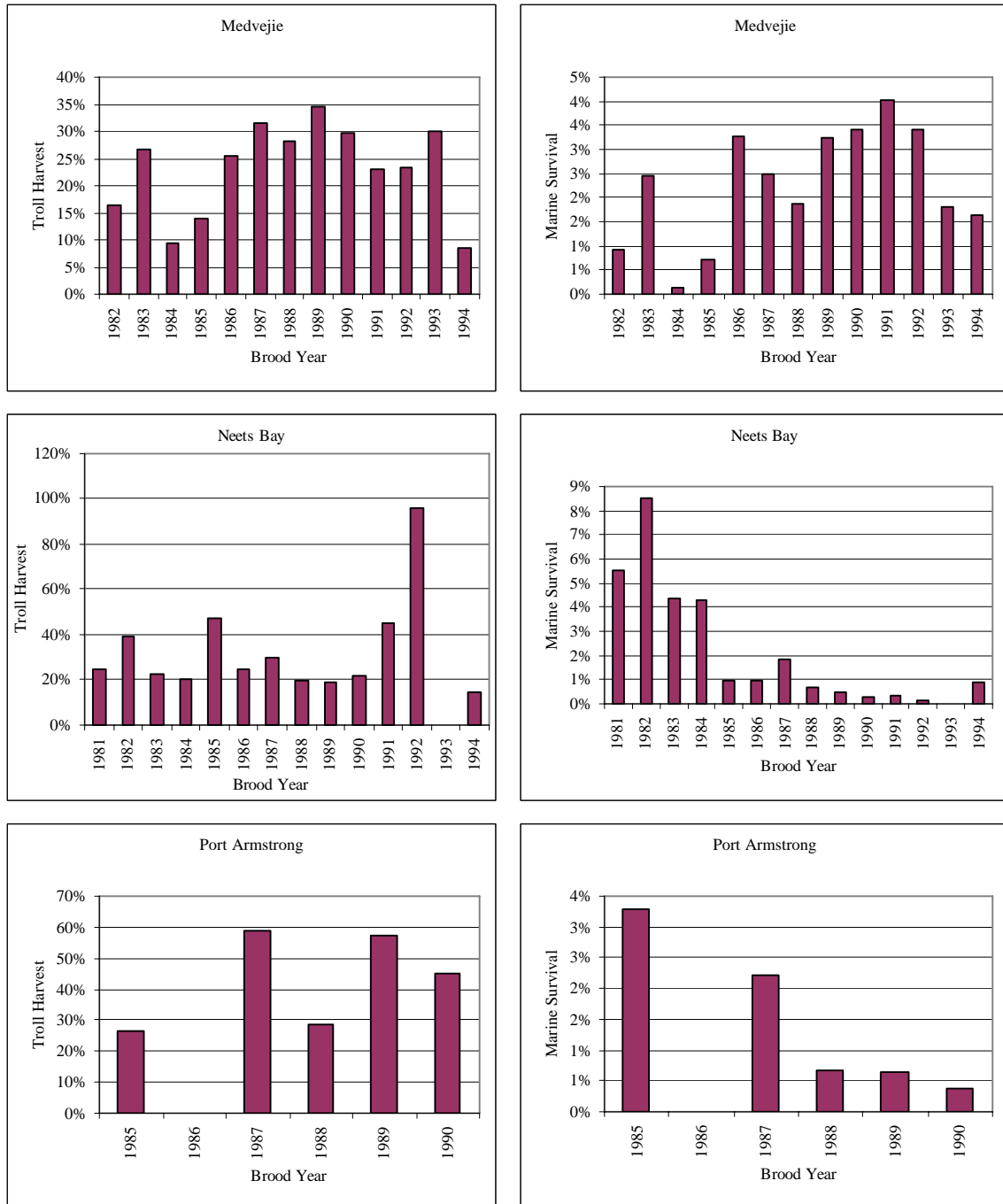


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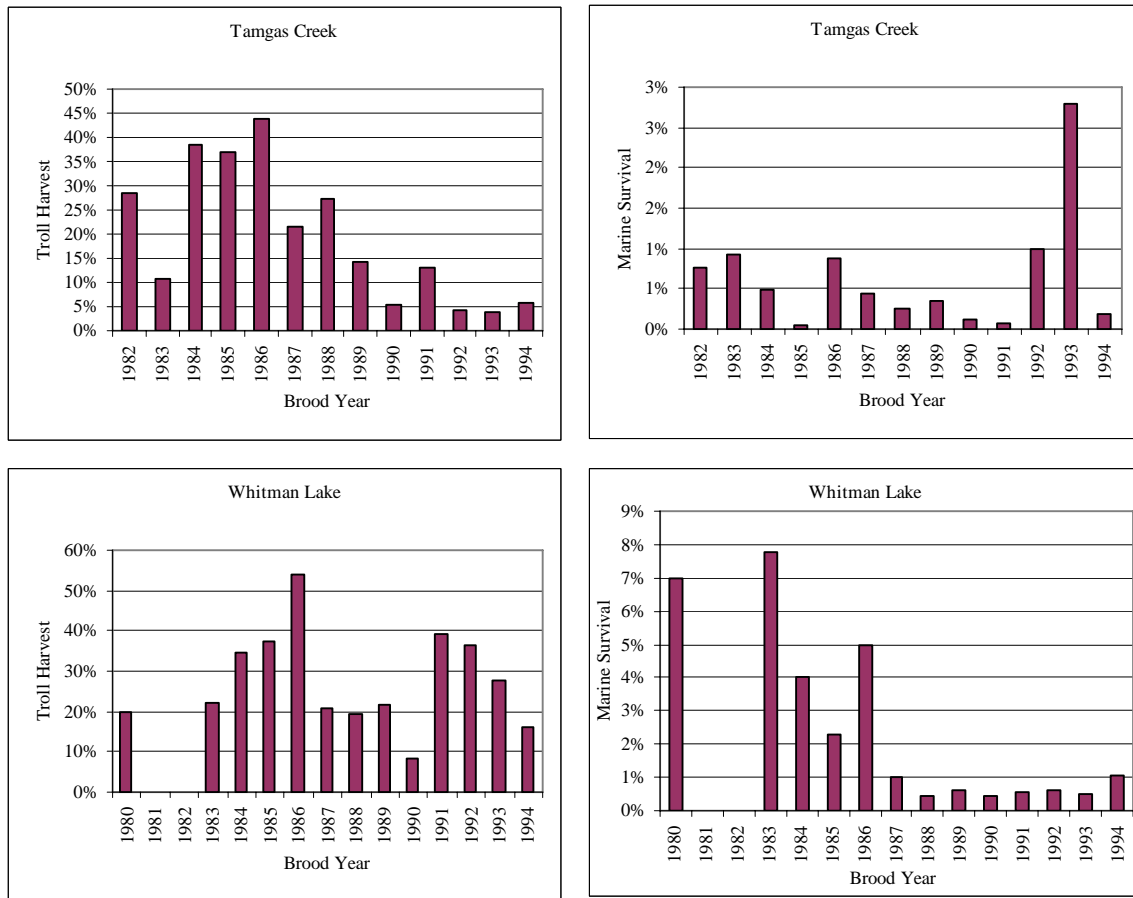


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